



Elmax Generating, LLC

Change to Registration for Electric Generating Unit Standard Permit

Registration No. 167032

Elmax Power Station
Huffman, Harris County

Regulated Entity No. RN111366449
Customer Reference No. CN606089365

Submitted To:
Texas Commission on Environmental Quality
Air Division
P.O. Box 13087
Austin, Texas 78711-3087

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1.0 INTRODUCTION

Elmax Generating, LLC (Elmax) owns the Elmax Power Station (the Plant), located near Huffman, Harris County, Texas. Texas Commission on Environmental Quality (TCEQ) Air Quality Standard Permit for Electric Generating Units (EGU Standard Permit), Registration No. 167032, originally issued on December 20, 2021, authorizes construction and operation of six natural gas-fired simple cycle combustion turbine generators (CTG) and ancillary equipment. A request for extension of start of construction was granted on November 10, 2022. Construction of the Plant has not yet commenced. In response to Winter Storm Uri, the Texas legislature created the Texas Energy Fund (TEF) to provide grants and loans to finance the construction, maintenance, modernization, and operation of electric facilities in Texas. The Elmax site was awarded financing under the TEF, but for ten CTGs rather than six¹. This submittal for a change to the registration will add four CTGs to the permitted sources, as well as address project updates that have arisen since issuance of the registration, and correct issues identified with the Standard Permit Maximum Emission Rates Table. This application has been prepared following guidance obtained from TCEQ staff in a pre-permit meeting held on October 31, 2024.

1.1 Permit Changes

Additional Units

The additional turbines will be identical to the other turbines to be constructed at the Plant, that is, simple cycle, natural gas fired, General Electric (GE) LM6000 series aeroderivative or similar aeroderivative with comparable specifications, nominally rated at 50 megawatts (MW) output. During the pre-permit meeting, TCEQ staff advised that increasing the number of units should not be treated as a separate project for determining applicability of major new source review permitting, but should be aggregated with the original project and a retrospective applicability review conducted. Short term pound per hour (lb/hr), annual ton per year (tpy), and annual tpy cap emissions from the CTGs have been recalculated based on representative operations for a ten-unit site. The retrospective applicability review is included in this registration change application and incorporates all changes requested in the application.

Note that another plant, named Elmax II and owned by WattBridge Texas, LLC, was permitted at the same site subsequent to the permitting of the Elmax Power Station. The Elmax II plant, authorized under Standard Permit Registration No. 168124, will not be constructed and the registration will be left to expire.

Peak Firing and Wet Compression

For the LM6000 model combustion turbine, one of the primary parameters used by the control system to limit the maximum firing rate is the temperature at the inlet to the low pressure turbine (the “T48” temperature). The CTG efficiency and power output increase as the T48 temperature

¹ Appendix D contains a copy of the memorandum from the Public Utility Commission of Texas authorizing advancement of the Elmax Power Station project under the TEF loan program (Application 237 under parent company sponsor WattBridge Energy IPP Holdings, LLC).

increases, but higher temperatures increase wear on turbine components, requiring shorter overhaul cycles. The base setpoint for T48 is 1,600 °F, and the turbine controls will limit the natural gas fuel flow to maintain the temperature below 1,600 °F. Operations of the CTG are affected by ambient conditions, such that during summer conditions the hot inlet air contributes to the T48 temperature, and the CTG controls have to limit the firing rate (and therefore reduce the megawatt power output) more than during a cold winter day. This loss in power output on hot days unfortunately coincides with some of the highest electricity demand. Peak firing is an option available to recover some of the lost power output on a limited basis.

Under peak firing, the T48 setpoint is increased slightly, allowing the CTG to burn more fuel and produce more power. At the maximum level of peak firing we anticipate using, up to 4 MW of power could be recovered. However, the increased wear significantly shortens the time between major overhauls, by up to an 8x factor. The increased cost of shortening the overhaul cycle means that peak firing will only be employed for a minimal number of hours during times of very high demand, where the high sales price of power justifies the cost of peak firing. Based on historical power pricing in the Houston market, we anticipate up to 250 hours per year of peak firing. Note that this is not an increase in the projected number of operating hours because at this price point, the units are expected to be dispatched anyway.

The CTGs utilize water injection technologies for power augmentation. Atomized water is injected into the airflow on the compressor side of the combustion turbine, increasing the mass flow. Rapid evaporation of the water spray cools the airflow, allowing higher inlet air mass flow rates. These actions result in the CTG recapturing output capacity that would be lost during hot summer conditions. Various water injection power augmentation technologies are available, differing primarily on the location where the injection occurs, the amount of water that can be injected, and the size of the water droplets. The units are currently authorized for two technologies, inlet fogging and Water Spray for Power Augmentation (WSPA). Wet compression, an additional power augmentation option where water injection occurs at the high pressure compressor, will be added to the units. The water injection systems will be optimized to accommodate peak firing.

Short Term CTG Emission Rates

As noted above, CTG operations are impacted by ambient conditions. In the initial application, emission rate scenarios for short term hourly and annual emissions were calculated based on nominal CTG performance at ISO conditions (59 degrees Fahrenheit). However, the units can operate at higher heat input rates on cold winter days. Revised short term lb/hr emissions and calculations are shown on Table 1(a) and Table B-1, to account for winter weather conditions.

Standard Permit Maximum Emission Rates Table

In the initial application for Standard Permit Registration No. 167032, the Table 1(a) presented separate pound per hour (lb/hr) and ton per year (tpy) emission rates for each individual CTG, and a cap for the annual tpy emissions for the CTGs as a group. However, in the Standard Permit Maximum Emission Rates Table attached to the issuance letter, the lb/hr emission rates for the CTGs are grouped together in caps for normal and MSS operations. Pound per hour caps were not requested in the initial application, and although it may seem to provide

operational flexibility, it would be impractical to operate the units with lb/hr caps and would require extensive reprogramming of the Data Acquisition and Handling System software for the continuous emissions monitors. We request that the structure of the Table 1(a) in this current application be used when the Standard Permit Maximum Emission Rates Table is revised to incorporate the requested changes, i.e. the individual CTGs have emission limits, only the annual CTG emissions are capped, and the new sources are added to the table.

2.0 PROCESS DESCRIPTION

2.1 Combustion Turbine Generators

The Plant will be comprised of ten natural gas-fired simple cycle combustion turbine generators and ancillary equipment. The combustion turbines to be installed will be General Electric (GE) LM6000 series aeroderivative or similar aeroderivative with comparable specifications, with a nominal 50 megawatts (MW) output. In each of the simple cycle units, ambient air will be drawn in through the air inlet and enter the compressor section of the CTG. Water injection systems will be employed for power augmentation, to inject atomized water into the airflow on the compressor side of the unit, increasing the mass flow. Rapid evaporation of the water spray will cool the airflow, allowing higher inlet air mass flow rates, resulting in the CTG recapturing output capacity that would be lost during hot summer conditions. Natural gas will be mixed with the compressed inlet air and combusted in the combustor section of the CTG. A water injection system will be used to reduce the emissions of NO_x formed in the combustors. The hot combustion gases will expand through the unit across turbine blades, causing rotation of the turbine shafts, which in turn drive the compressor sections and an electric generator, producing electricity. The hot exhaust will then pass through an oxidation catalyst to reduce CO and VOC emissions and subsequently pass through a selective catalytic reduction (SCR) system to reduce NO_x emissions before exiting through a stack (Emission Point Numbers [EPNs] CT-1 through CT-10). A process flow diagram is included at the end of this section.

2.2 Oxidation Catalyst, SCR Systems, and Ammonia Handling Systems

Oxidation catalysts will be used to reduce emissions of CO and VOC from the CTGs. The oxidation catalysts will be placed downstream of the turbine outlet and upstream of the SCR system because the optimal operating temperature range of the oxidation catalyst is broader and less sensitive to higher temperatures than the SCR catalyst. The optimal operating temperature range of the oxidation catalyst is from 350° to 1,350°F. The catalyst will promote oxidation of CO and VOC to carbon dioxide and water as the emission stream passes through the catalyst bed.

SCR systems will be used to reduce emissions of NO_x. The SCR bed will be placed downstream of the oxidation catalyst because the optimal operating temperature range of the SCR catalyst is narrower and more sensitive to higher temperatures than the oxidation catalyst. The optimal operating temperature range of the SCR catalyst is from 400°F to 800°F. An ammonia (NH₃) injection grid will evenly distribute vaporized NH₃ into the mixed exhaust stream upstream of the SCR catalyst bed. The SCR catalyst is optimized to use the NH₃ to convert the NO_x in the exhaust stream into nitrogen and water vapor, with a limited amount of NH₃ slip. The use of SCR will allow the simple cycle CTG to meet the 0.14 pounds of NO_x per megawatt-hour (lb NO_x/MW-hr) emission certification requirement in the EGU Standard Permit.

One 25,000-gallon tank for storage of aqueous NH₃ solution will be located at the site. The aqueous NH₃ solution, containing 19 percent NH₃, will be delivered by tanker truck. The NH₃

storage tank will maintain working pressure sufficient to prevent working and breathing loss emissions to the atmosphere. Piping components associated with the tank and the distribution of NH_3 throughout the system will be sources of fugitive emissions. The EPN for the NH_3 systems is EPN NH_3 -FUG.

2.3 Turbine Lube Oil, Generator Lube Oil, and Hydraulic Oil Systems

The units will include closed-loop lube oil recirculation systems to lubricate the moving parts of each combustion turbine and generator. Additionally, the units will include a hydraulic fluid service. Oil vapor (constituting VOC) and oil mist (constituting particulate matter [PM]) emissions will be generated by oil vaporization resulting from heating of lube oil in the combustion turbines and generators and subsequent condensation of droplets when the vapor is cooled in the cooler zones of the storage reservoir compartment. Lube oil mist emissions from the reservoir compartment will pass through an air/oil separator and then through a dedicated vent (EPNs CT-LOV-1 through CT-LOV-10 and GEN-LOV-1 through GEN-LOV-10). Similarly, VOC and PM emissions have been quantified for the hydraulic oil systems (EPNs HYD-OV-1 through HYD-OV-10).

2.4 Natural Gas, Lube Oil, and Hydraulic Fluid Piping

Natural gas will be delivered to the site via pipeline and then metered and piped to the combustion turbines. The lube oil and hydraulic oil systems will receive recirculated oil through piping from oil reservoirs. Fugitive emissions resulting from piping components in natural gas and oil service have been calculated and are designated as EPN VOC-FUG.

2.5 Startup/Shutdown Activities

Startup and shutdown of the CTGs will be part of the regularly scheduled operations at the Plant. Startup and shutdown periods for the units will be defined by monitored operating conditions. The startup period will begin when an initial flame detection signal is recorded in the plant's data acquisition and handling system (DAHS) and ends when the startup load ramping is complete, CO and SCR catalysts attain operating temperatures, and emissions have been controlled in a steady state to meet the normal operations emission limits. The shutdown period will begin when a shutdown signal is initiated in the CTG controller and ends when a flame detection signal is no longer recorded in the plant's DAHS. The duration of a startup for a GE LM6000 can vary between 10 and 45 minutes; however, the average duration of a startup typically lasts about 15 minutes. Because startups for this combustion turbine model can occur rapidly, it is possible to start up a unit twice in a 60-minute period. Therefore, the calculated maximum hourly startup emission rate is based upon two startups and shutdowns in a 60-minute period.

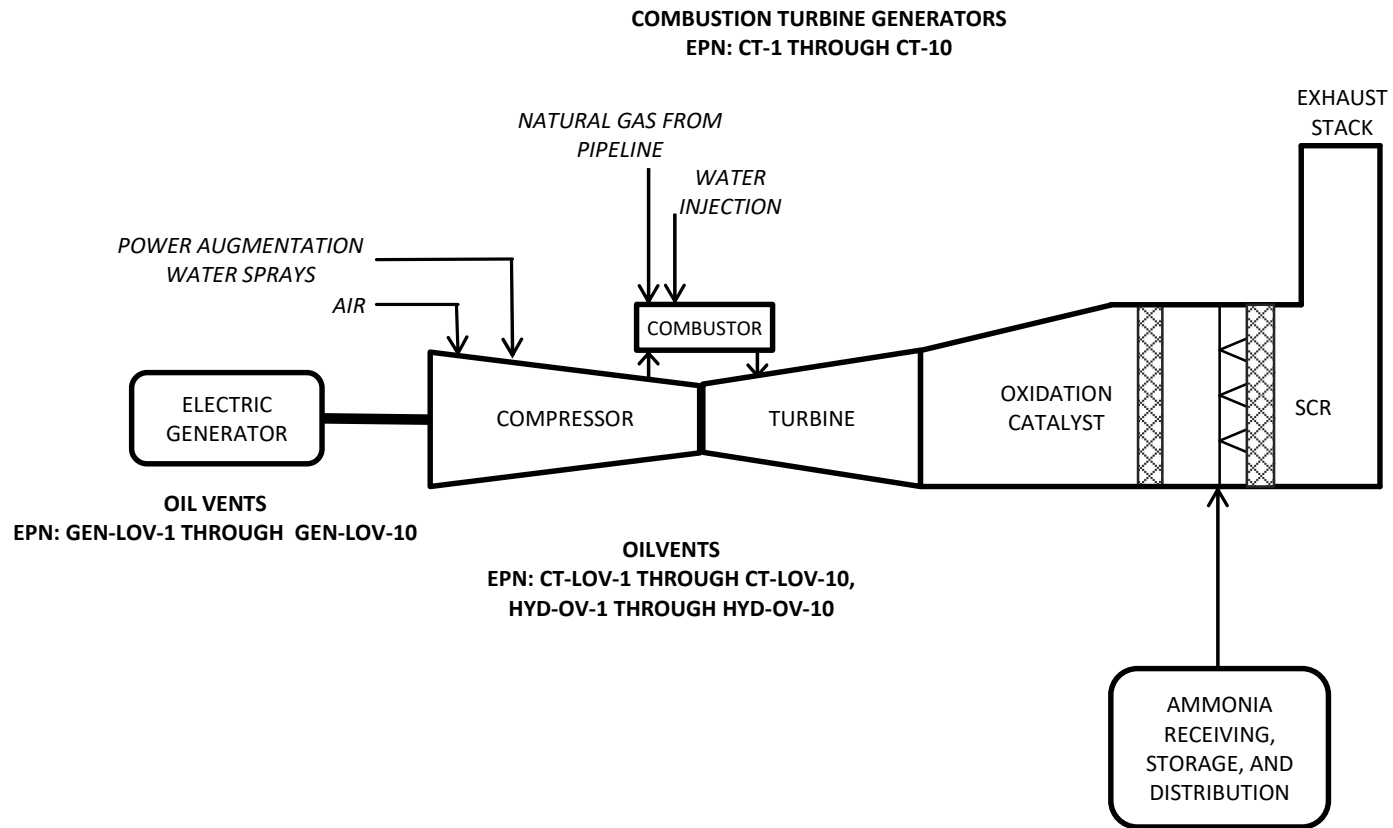
During startup and shutdown periods, NO_x , CO, VOC, and NH_3 are emitted at higher levels than during normal operating conditions. During startup, higher NO_x emissions occur during the transition period before the water injection system can achieve optimal control and before the SCR catalyst bed reaches the optimal operating temperature range. During startup and

shutdown, higher CO emissions will result due to incomplete combustion because of the low firing levels and the reduced effectiveness of the oxidation catalyst until it reaches its optimal operating temperature range. Higher NH₃ emissions may occur during startup while the SCR is coming into service. The maximum one-hour emissions resulting from startups and shutdowns have been identified in Table 1(a).

2.6 Inherently Low Emitting Maintenance Activities

Several maintenance-related activities associated with the EGUs are expected to result in inherently low emissions such that it will be unnecessary to require burdensome compliance recordkeeping for these activities. These inherently low emitting (ILE) maintenance activities are summarized in Table B-6 included in Appendix B. Specific calculations for these activities are found in Tables B-7 through B-12.

The TCEQ has recognized and included these maintenance activities in numerous New Source Review permits issued for EGUs. Elmax has quantified maximum emissions resulting from the following maintenance activities related to the proposed EGUs to be authorized in this Standard Permit registration: turbine washing (while units are on-line); air intake filter maintenance; catalyst handling/maintenance; NH₃ equipment maintenance; fuel gas venting; and analytical equipment maintenance.



ELMAX POWER STATION

PROCESS FLOW DIAGRAM

EGU Standard Permit Registration

Drawn by:	E Rapier	Date:	12/11/24
Checked by:	J Coleman	Sheet:	1 of 1

3.0 COMPLIANCE WITH REQUIREMENTS OF 30 TAC §116.610 AND 116.615

The following discussion presents the requirements of 30 TAC §116.610 and §116.615 and explains how Elmax complies with each of the requirements.

3.1 §116.610. Applicability

- (a) Under the TCAA, §382.051, a project that meets the requirements for a standard permit listed in this subchapter or issued by the commission is hereby entitled to the standard permit, provided the following conditions listed in this section are met. For the purposes of this subchapter, project means the construction or modification of a facility or a group of facilities submitted under the same registration:

- (1) Any project that results in a net increase in emissions of air contaminants from the project other than water, nitrogen, ethane, hydrogen, oxygen, or greenhouse gases (GHGs) as defined in §101.1 of this title (relating to Definitions), or those for which a national ambient air quality standard has been established must meet the emission limitations of §106.261 of this title (relating to Facilities (Emission Limitations)), unless otherwise specified by a particular standard permit.

Per section 3(A) of the EGU Standard Permit, units that meet the conditions of the Standard Permit do not have to meet § 116.610(a)(1).

- (2) Construction or operation of the project must be commenced prior to the effective date of a revision to this subchapter under which the project would no longer meet the requirements for a standard permit.

There is no pending revision to this subchapter.

- (3) The proposed project must comply with the applicable provisions of the Federal Clean Air Act (FCAA), §111 (concerning New Source Performance Standards) as listed under 40 Code of Federal Regulations (CFR) Part 60, promulgated by the United States Environmental Protection Agency (EPA).

The combustion turbines will be subject to New Source Performance Standard (NSPS) in 40 CFR Part 60, Subpart KKKK (Standards of Performance for Stationary Combustion Turbines) and Subpart TTTTa (Standards of Performance for Greenhouse Gas Emissions for Modified Coal-Fired Steam Electric Generating Units and New Construction and Reconstruction Stationary Combustion Turbine Electric Generating Units). The units will comply with all applicable requirements.

- (4) The proposed project must comply with the applicable provisions of FCAA, §112 (concerning Hazardous Air Pollutants) as listed under 40 CFR 61, promulgated by the EPA;

There are no Subparts under 40 CFR Part 61 that are applicable to facilities affected by this registration.

- (5) The proposed project must comply with the applicable maximum achievable control technology standards as listed under 40 CFR Part 63, promulgated by the EPA under FCAA, §112 or as listed under Chapter 113, Subchapter C of this title (relating to National Emissions Standards for Hazardous Air Pollutants for Source Categories (FCAA, §112, 40 CFR Part 63)).

40 CFR Part 63, Subpart YYYY, does not apply to the combustion turbines because the site will not be a major source of hazardous air pollutants.

- (6) If subject to Chapter 101, Subchapter H, Division 3 of this title (relating to Mass Emissions Cap and Trade Program) the proposed facility, group of facilities, or account must obtain allocations to operate.

The Plant will be subject to Chapter 101, Subchapter H, Division 3. Elmax will obtain the necessary allowances and comply with the NO_x Mass Cap and Trade Program.

- (b) Any project that constitutes a new major stationary source or major modification as defined in §116.12 of this title (relating to Nonattainment and Prevention of Significant Deterioration Review Definitions) because of emissions of air contaminants other than greenhouse gases is subject to the requirements of §116.110 of this title (relating to Applicability) rather than this subchapter. Notwithstanding any provision in any specific standard permit to the contrary, any project that constitutes a new major stationary source or major modification which is subject to Subchapter B, Division 6 of this chapter (relating to Prevention of Significant Deterioration Review) due solely to emissions of greenhouse gases may use a standard permit under this chapter for air contaminants that are not greenhouse gases.

Following guidance given by TCEQ staff during the pre-permit meeting, a retrospective applicability review has been conducted for the changes requested in this application. In a retrospective review, the original determination of applicability or non-applicability of NNSR or PSD is reviewed again, using the modified project emissions, to ensure that the project would not have triggered major source NSR at the time of initial permit issuance. Tables 1F and 2F present the project emissions and document that they are less than the NO_x and VOC major source thresholds for Serious ozone nonattainment areas in effect when the initial permit was issued, therefore, NNSR is not triggered.

The PSD Major Source threshold for a simple cycle power plant is 250 tons/yr of a PSD regulated pollutant pursuant to 40 CFR §52.21(b)(1)(i)(b). As documented on Table 1F, the Plant will not be a Major Source for PSD applicability purposes; therefore, PSD review is not triggered.

- (c) Persons may not circumvent by artificial limitations the requirements of §116.110 of this title.

Elmax will not circumvent the requirements of §116.110.

- (d) Any project involving a proposed affected source (as defined in §116.15(1) of this title (relating to Section 112(g) Definitions)) shall comply with all applicable requirements under Subchapter E of this chapter (relating to Hazardous Air Pollutants: Regulations

Governing Constructed or Reconstructed Major Sources (FCAA, §112(g), 40 CFR Part 63)). Affected sources subject to Subchapter E of this chapter may use a standard permit under this subchapter only if the terms and conditions of the specific standard permit meet the requirements of Subchapter E of this chapter.

The project will not involve an affected source that is subject to Subchapter E.

3.2 §116.615. General Conditions

The following general conditions are applicable to holders of standard permits but will not necessarily be specifically stated within the standard permit document.

- (1) Protection of public health and welfare. The emissions from the facility, including dockside vessel emissions, must comply with all applicable rules and regulations of the commission adopted under Texas Health and Safety Code, Chapter 382, and with intent of the TCAA, including protection of health and property of the public.
- (2) Standard permit representations. All representations with regard to construction plans, operating procedures, and maximum emission rates in any registration for a standard permit become conditions upon which the facility or changes thereto, must be constructed and operated. It is unlawful for any person to vary from such representations if the change will affect that person's right to claim a standard permit under this section. Any change in condition such that a person is no longer eligible to claim a standard permit under this section requires proper authorization under §116.110 of this title (relating to Applicability). If the facility remains eligible for a standard permit, the owner or operator of the facility shall notify the executive director of any change in conditions which will result in a change in the method of control of emissions, a change in the character of the emissions, or an increase in the discharge of the various emissions as compared to the representations in the original registration or any previous notification of a change in representations. Notice of changes in representations must be received by the executive director no later than 30 days after the change.
- (3) Standard permit in lieu of permit amendment. All changes authorized by standard permit to a facility previously permitted under §116.110 of this title (relating to Applicability) shall be administratively incorporated into that facility's permit at such time as the permit is amended or renewed.
- (4) Construction progress. Start of construction, construction interruptions exceeding 45 days, and completion of construction shall be reported to the appropriate regional office not later than 15 working days after occurrence of the event, except where a different time period is specified for a particular standard permit.
- (5) Start-up notification.
 - (A) The appropriate air program regional office of the commission and any other air pollution control program having jurisdiction shall be notified prior to the commencement of operations of the facilities authorized by a standard permit in such a manner that a representative of the executive director may be present.

- (B) For phased construction, which may involve a series of units commencing operations at different times, the owner or operator of the facility shall provide separate notification for the commencement of operations for each unit.
 - (C) Prior to beginning operations of the facilities authorized by the permit, the permit holder shall identify to the Office of Permitting, Remediation, and Registration the source or sources of allowances to be utilized for compliance with Chapter 101, Subchapter H, Division 3 of this title (relating to Mass Emissions Cap and Trade Program).
 - (D) A particular standard permit may modify start-up notification requirements.
- (6) Sampling requirements. If sampling of stacks or process vents is required, the standard permit holder shall contact the Office of Air Quality and any other air pollution control program having jurisdiction prior to sampling to obtain the proper data forms and procedures. All sampling and testing procedures must be approved by the executive director and coordinated with the regional representatives of the commission. The standard permit holder is also responsible for providing sampling facilities and conducting the sampling operations or contracting with an independent sampling consultant.
 - (7) Equivalency of methods. The standard permit holder shall demonstrate or otherwise justify the equivalency of emission control methods, sampling or other emission testing methods, and monitoring methods proposed as alternatives to methods indicated in the conditions of the standard permit. Alternative methods must be applied for in writing and must be reviewed and approved by the executive director prior to their use in fulfilling any requirements of the standard permit.
 - (8) Recordkeeping. A copy of the standard permit along with information and data sufficient to demonstrate applicability of and compliance with the standard permit shall be maintained in a file at the plant site and made available at the request of representatives of the executive director, the EPA, or any air pollution control program having jurisdiction. For facilities that normally operate unattended, this information shall be maintained at the nearest staffed location within Texas specified by the standard permit holder in the standard permit registration. This information must include, but is not limited to, production records and operating hours. Additional recordkeeping requirements may be specified in the conditions of the standard permit. Information and data sufficient to demonstrate applicability of and compliance with the standard permit must be retained for at least two years following the date that the information or data is obtained. The copy of the standard permit must be maintained as a permanent record.
 - (9) Maintenance of emission control. The facilities covered by the standard permit may not be operated unless all air pollution emission capture and abatement equipment is maintained in good working order and operating properly during normal facility operations. Notification for emissions events and scheduled maintenance shall be made in accordance with §101.201 and §101.211 of this title (relating to Emissions Event Reporting and Recordkeeping Requirements; and Scheduled Maintenance, Startup, and Shutdown Reporting and Recordkeeping).
 - (10) Compliance with rules. Registration of a standard permit by a standard permit applicant constitutes an acknowledgment and agreement that the holder will comply with all rules, regulations, and orders of the commission issued in conformity with the TCAA and the conditions precedent to the claiming of the standard permit. If more than one state or

federal rule or regulation or permit condition is applicable, the most stringent limit or condition shall govern. Acceptance includes consent to the entrance of commission employees and designated representatives of any air pollution control program having jurisdiction into the permitted premises at reasonable times to investigate conditions relating to the emission or concentration of air contaminants, including compliance with the standard permit.

Elmax will adhere to these General Conditions and will operate the units authorized by the Standard Permit in compliance with the above subparagraphs.

4.0 COMPLIANCE WITH REQUIREMENTS OF THE EGU STANDARD PERMIT

The following discussion presents the requirements of the EGU Standard Permit and explains how Elmax complies with each of the requirements.

Air Quality Standard Permit for Electric Generating Units

Effective Date May 16, 2007

This standard permit authorizes electric generating units that generate electricity for use by the owner or operator and/or generate electricity to be sold to the electric grid, and that meet all of the conditions listed below.

(1) Applicability

- (A) This standard permit may be used to authorize electric generating units installed or modified after the effective date of this standard permit and that meet the requirements of this standard permit.

This Standard Permit is being used to authorize ten EGUs that meet the requirements of the permit.

- (B) This standard permit may not be used to authorize boilers. Boilers may be authorized under the Air Quality Standard Permit for Boilers; 30 TAC § 106.183, Boilers, Heaters, and Other Combustion Devices; or a permit issued under the requirements of 30 TAC Chapter 116.

The units authorized by the Standard Permit are simple cycle gas turbines, not boilers.

(2) Definitions

- (A) East Texas Region - All counties traversed by or east of Interstate Highway 35 or Interstate Highway 37, including Bosque, Coryell, Hood, Parker, Somervell and Wise Counties.
- (B) Installed - a generating unit is installed on the site when it begins generating electricity.
- (C) West Texas Region - Includes all of the state not contained in the East Texas Region.
- (D) Renewable fuel - fuel produced or derived from animal or plant products, byproducts or wastes, or other renewable biomass sources, excluding fossil fuels. Renewable fuels may include, but are not limited to, ethanol, biodiesel, and biogas fuels.

This section contains no requirements.

(3) Administrative Requirements

- (A) Electric generating units shall be registered in accordance with 30 TAC § 116.611, Registration to Use a Standard Permit, using a current Form PI-1S. Units that meet

the conditions of this standard permit do not have to meet 30 TAC § 116.610(a)(1), Applicability.

A completed Form PI-1S is included in this registration package.

- (B) Registration applications shall comply with 30 TAC § 116.614, Standard Permit Fees, for any single unit or multiple units at a site with a total generating capacity of 1 megawatt (MW) or greater. The fee for units or multiple units with a total generating capacity of less than 1 MW at a site shall be \$100.00. The fee shall be waived for units or multiple units with a total generating capacity of less than 1 MW at a site that have certified nitrogen oxides (NO_x) emissions that are less than 10 percent of the standards required by this standard permit.

A registration fee of \$900 has been submitted to the TCEQ.

- (C) No owner or operator of an electric generating unit shall begin construction and/or operation without first obtaining written approval from the executive director.

Elmax will not begin construction until after receiving written approval from the TCEQ Executive Director.

- (D) Records shall be maintained and provided upon request to the Texas Commission on Environmental Quality (TCEQ) for the following:
- (i) Hours of operation of the unit;
 - (ii) Maintenance records, maintenance schedules, and/or testing reports for the unit to document re-certification of emission rates as required by subsection (4)(G) below; and
 - (iii) Records to document compliance with the fuel sulfur limits in subsection (4)(C).

Elmax will maintain the applicable records.

- (E) Electric generators powered by gas turbines must meet the applicable conditions, including testing and performance standards, of Title 40 Code of Federal Regulations (CFR) Part 60, Subpart GG, Standards of Performance for Stationary Gas Turbines, and applicable requirements of 40 CFR Part 60 Subpart KKKK, Standards of Performance for Stationary Combustion Turbines.

The combustion turbines will meet the requirements of 40 CFR Part 60, Subpart KKKK.

- (F) Compliance with this standard permit does not exempt the owner or operator from complying with any applicable requirements of 30 TAC Chapter 117, Control of Air Pollution from Nitrogen Compounds, or 30 TAC Chapter 114, Control of Air Pollution from Motor Vehicles.

Elmax will comply with the applicable requirements of 30 TAC Chapters 114 and 117.

(4) General Requirements

- (A) Emissions of NO_x from the electric generating unit shall be certified by the manufacturer or by the owner or operator in pounds of pollutant per megawatt hour

(lb/MWh). This certification must be displayed on the name plate of the unit or on a label attached to the unit. Test results from U.S. Environmental Protection Agency (EPA) reference methods, California Air Resources Board methods, or equivalent alternative testing methods approved by the executive director used to verify this certification shall be provided upon request to the TCEQ. The unit must operate on the same fuel(s) for which the unit was certified.

The emissions certification will be displayed on the units and test results will be provided to the TCEQ upon request. The units will burn natural gas.

- (B) Electric generating units that use combined heat and power (CHP) may take credit for the heat recovered from the exhaust of the combustion unit to meet the emission standards in subsections (4)(D), (4)(E), and (4)(F). Credit shall be at the rate of one MWh for each 3.4 million British Thermal Units of heat recovered. The following requirements must be met to take credit for CHP for units not sold and certified as an integrated package by the manufacturer:
- (i) The owner or operator must provide as part of the application documentation of the heat recovered, electric output, efficiency of the generator alone, efficiency of the generator including CHP, and the use for the non-electric output, and
 - (ii) The heat recovered must equal at least 20 percent of the total energy output of the CHP unit.

The combustion turbine units do not use combined heat and power.

- (C) Fuels combusted in these electric generating units are limited to:
- (i) Natural gas containing no more than ten grains total sulfur per 100 dry standard cubic feet;
 - (ii) Landfill gas, digester gas, stranded oilfield gas, or gaseous renewable fuel containing no more than 30 grains total sulfur per 100 dry standard cubic feet; or
 - (iii) Liquid fuels (including liquid renewable fuel) not containing waste oils or solvents and containing less than 0.05 percent by weight sulfur.

The fuel combusted is natural gas containing no more than ten grains total sulfur per 100 dry standard cubic feet.

- (D) Except as provided in subsections (4)(F) and (4)(H), NO_x emissions for units 10 MW or less shall meet the following limitations based upon the date the unit is installed and the region in which it operates:

East Texas Region:

- (i) Units installed prior to January 1, 2005 and
 - (a) operating more than 300 hours per year - 0.47 lb/MWh;
 - (b) operating 300 hours or less per year - 1.65 lb/MWh;
- (ii) Units installed on or after January 1, 2005 and
 - (a) operating more than 300 hours per year, with a capacity greater than 250 kilowatts (kW) - 0.14 lb/MWh;

- (b) operating 300 hours or less per year - 0.47 lb/MWh; or
- (c) any unit with a capacity of 250 kW or less - 0.47 lb/MWh.

West Texas Region:

- (i) Units operating more than 300 hours per year - 3.11 lb/MWh;
- (ii) Units operating 300 hours or less per year - 21 lb/MWh.

Units certified to comply with applicable Tier 1, 2, or 3 emission standards in 40 CFR Part 89, Control of Emissions from New and In-Use Nonroad Compression-Ignition Engines, are deemed to satisfy this emission limit.

This section does not apply as the units are rated greater than 10 MW in output capacity.

- (E) Except as provided in subsections (4)(F) and (4)(H), NO_x emissions for units greater than 10 MW shall meet the following limitations:
 - (i) Units operating more than 300 hours per year - 0.14 lb/MWh;
 - (ii) Units operating 300 hours or less per year - 0.38 lb/MWh.

The units operate more than 300 hours per year and meet the NO_x emission certification requirement of 0.14 lb/MWh when the units are operating at 80% and greater of the rated load.

- (F) Electric generating units firing any gaseous or liquid fuel that is at least 75 percent landfill gas, digester gas, stranded oil field gas, or renewable fuel content by volume, shall meet a NO_x emission limit of 1.90 lb/MWh. Units in West Texas with a capacity of 10 MW or less that fire at least 75 percent landfill gas, digester gas, stranded oilfield gases, or gaseous or liquid renewable fuel by volume, must comply with the applicable West Texas NO_x limit in subsection (4)(D).

This section does not apply as the units fire natural gas.

- (G) To ensure continuing compliance with the emissions limitations, the owner or operator shall re-certify a unit every 16,000 hours of operation, but no less frequently than every three years. Re-certification may be accomplished by following a maintenance schedule that the manufacturer certifies will ensure continued compliance with the required NO_x standard or by third party testing of the unit using appropriate EPA reference methods, California Air Resources Board methods, or equivalent alternative testing methods approved by the executive director to demonstrate that the unit still meets the required emission standards. After re-certification, the unit must operate on the same fuel(s) for which the unit was re-certified.

Elmax will comply with the recertification requirements of this subparagraph.

- (H) The NO_x emission limits in subsections (4)(D)-(4)(F) are subject to the following exceptions:

- (i) The hourly NO_x emission limits do not apply at times when the ambient air temperature at the location of the unit is less than 0 degrees Fahrenheit.

Elmax is aware that the hourly NO_x emission limit will not apply when the local ambient temperature is less than 0 degrees Fahrenheit.

- (ii) At times when a unit is operating at less than 80% of rated load, an alternative NO_x emission standard for that unit may be determined by multiplying the applicable emission standard in subsections (4)(D)-(4)(F) by the rated load of the EGU (in MW), to produce an allowable hourly mass NO_x emission rate. In order to use this alternative standard, an owner or operator must maintain records that demonstrate compliance with the alternative emission standard, and make such records available to the TCEQ or any local air pollution control agency with jurisdiction upon request.

Elmax will maintain the appropriate records if choosing to demonstrate compliance with the alternative NO_x emission standard. Maximum NO_x mass emissions during startup and shutdown of the turbines are presented in the emission calculations in Appendix B and are not considered subject to the lb/MWh normal operating limits specified in this paragraph because the units are in startup mode and not generating electricity for a portion of that time.

APPENDIX A TCEQ FORMS

- **FORM PI-1S**
- **TABLE 1(A)**
- **TABLE 1F**
- **TABLE 2F**

Form PI-1S
Registrations for Air Standard Permit
(Page 1)
Texas Commission on Environmental Quality

I. Registrant Information
A. Company or Other Legal Customer Name:
Elmax Generating, LLC
B. Company Official Contact Information (☐ Mr. ☐ Mrs. ☒ Ms. ☐ Other:)
Name: Jennifer Coleman
Title: Director Regulatory Compliance
Mailing Address: 2001 PROENERGY Blvd
City: Sedalia
State: MO
ZIP Code: 65301
Telephone No.: (660) 596-7828
Fax No.:
Email Address: jcoleman@proenergyservices.com
<i>All permit correspondence will be sent via email.</i>
C. Technical Contact Information (☒ Mr. ☐ Mrs. ☐ Ms. ☐ Other:)
Name: Edward Rapier
Title: Senior Environmental Engineer
Company Name: PROENERGY Services LLC
Mailing Address: 2001 PROENERGY Blvd
City: Sedalia
State: MO
ZIP Code: 65301
Telephone No.: (737) 781-3708
Fax No.:
Email Address: erapier@proenergyservices.com
II. Facility and Site Information
A. Name and Type of Facility
Facility Name: Elmax Power Station
Type of Facility: ☒ Permanent ☐ Temporary

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Registrations for Air Standard Permit
(Page 2)
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II. Facility and Site Information (continued)
For portable units, please provide the serial number of the equipment being authorized below.
Serial No(s):
B. Facility Location Information
Street Address:
If there is no street address, provide written driving directions to the site and provide the closest city or town, county, and ZIP code for the site (attach description if additional space is needed).
On Crosby Huffman Rd, approximately 120 yards south of its intersection with FM 1960.
City: Huffman
County: Harris
ZIP Code: 77336
C. Core Data Form (required for Standard Permits 6006, 6007, and 6013).
Is the Core Data Form (TCEQ Form 10400) attached? ☐ Yes ☒ No
Customer Reference Number (CN): CN606089365
Regulated Entity Number (RN): RN111366449
D. TCEQ Account Identification Number (if known):
E. Type of Action
☐ Initial Application ☒ Change to Registration ☐ Renewal ☐ Renewal Certification
For Change to Registration, Renewal, or Renewal Certification actions provide the following:
Registration Number: 167032
Expiration Date: 12/20/2031
F. Standard Permit Claimed: 6005 - Electric Generating Unit
G. Previous Standard Exemption or PBR Registration Number:
Is this authorization for a change to an existing facility previously authorized under a standard exemption or PBR? ☐ Yes ☒ No
If "Yes," enter previous standard exemption number(s) and PBR registration number(s) and associated effective date in the spaces provided below.

Form PI-1S
Registrations for Air Standard Permit
(Page 3)
Texas Commission on Environmental Quality

II. Facility and Site Information (<i>continued</i>)
H. Other Facilities at this Site Authorized by Standard Exemption, PBR, or Standard Permit
Are there any other facilities at this site that are authorized by an Air Standard Exemption, PBR, or Standard Permit? ☐ Yes ☒ No
If "Yes," enter standard exemption number(s), PBR registration number(s), and Standard Permit registration number(s), and associated effective date in the spaces provided below.
Standard Exemption, PBR Registration, and Standard Permit Registration Number(s) and Effective Date(s)
I. Other Air Preconstruction Permits
Are there any other air preconstruction permits at this site? ☐ Yes ☒ No
If "Yes," enter permit number(s) in the spaces provided below.
J. Affected Air Preconstruction Permits
Does the standard permit directly affect any permitted facility? ☐ Yes ☒ No
If "Yes," enter permit number(s) in the spaces provided below.
K. Federal Operating Permit (FOP) Requirements
Is this facility located at a site that is required to obtain a FOP pursuant to 30 TAC Chapter 122? ☒ Yes ☐ No ☐ To Be Determined
Check the requirements of 30 TAC Chapter 122 that will be triggered if this standard permit is approved (<i>check all that apply</i>).
☒ Initial Application for a FOP ☐ Significant Revision for a SOP ☐ Minor Revision for a SOP
☐ Operational Flexibility/Off Permit Notification for a SOP ☐ Revision for a GOP
☐ To be Determined ☐ None
Identify the type(s) of FOP issued and/or FOP application(s) submitted/pending for the site. (<i>check all that apply</i>)
☐ SOP ☐ GOP ☐ GOP application/revision (submitted or under APD review) ☒ N/A
☐ SOP application/revision (submitted or under APD review)

Form PI-1S
Registrations for Air Standard Permit
(Page 4)
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III. Fee Information (go to www.tceq.texas.gov/epay to pay online)
A. Fee Amount: \$900
B. Voucher number from ePay: To be paid online at time of submittal
IV. Public Notice (if applicable)
A. Responsible Person (☐ Mr. ☐ Mrs. ☐ Ms. ☐ Other:) _____
Name: _____
Title: _____
Company: _____
Mailing Address: _____
City: _____
State: _____
ZIP Code: _____
Telephone No.: _____
Fax No.: _____
Email Address: _____
B. Technical Contact (☐ Mr. ☐ Mrs. ☐ Ms. ☐ Other:) _____
Name: _____
Title: _____
Company: _____
Mailing Address: _____
City: _____
State: _____
ZIP Code: _____
Telephone No.: _____
Fax No.: _____
Email Address: _____
C. Bilingual Notice
Is a bilingual program required by the Texas Education Code in the School District? ☐ Yes ☐ No
Are the children who attend either the elementary school or the middle school closest to your facility eligible to be enrolled in a bilingual program provided by the district? ☐ Yes ☐ No

Form PI-1S
Registrations for Air Standard Permit
(Page 5)
Texas Commission on Environmental Quality

IV. Public Notice (<i>continued</i>) (if applicable) (continued)
If "Yes," list which language(s) are required by the bilingual program below?
D. Small Business Classification and Alternate Public Notice
Does this company (including parent companies and subsidiary companies) have fewer than 100 employees or less than \$6 million in annual gross receipts? ☐ Yes ☐ No
Is the site a major source under 30 TAC Chapter 122, Federal Operating Permit Program? ☐ Yes ☐ No
Are the site emissions of any individual regulated air contaminant equal to or greater than 50 tpy? ☐ Yes ☐ No
Are the site emissions of all regulated air contaminant combined equal to or greater than 75 tpy? ☐ Yes ☐ No
V. Renewal Certification Option
A. Does the permitted facility emit an air contaminant on the Air Pollutant Watch List, and is the permitted facility located in an area on the watch list? ☐ Yes ☐ No
B. For facilities participating in the Houston/Galveston/Brazoria area (HGB) cap and trade program for highly reactive VOCs (HRVOCs), do the HRVOCs need to be speciated on the maximum allowable emission rates table (MAERT)? ☐ Yes ☐ No
C. Does the company and/or site have an unsatisfactory compliance history? ☐ Yes ☐ No
D. Are there any applications currently under review for this standard permit registration? ☐ Yes ☐ No
E. Are scheduled maintenance, startup, or shutdown emissions required to be included in the standard permit registration at this time? ☐ Yes ☐ No
F. Are any of the following actions being requested at the time of renewal: ☐ Yes ☐ No
1. Are there any facilities that have been permanently shutdown that are proposed to be removed from the standard permit registration? ☐ Yes ☐ No
2. Do changes need to be made to the standard permit registration in order to remain in compliance? ☐ Yes ☐ No
3. Are sources or facilities that have always been present and represented, but never identified in the standard permit registration, proposed to be included with this renewal? ☐ Yes ☐ No
4. Are there any changes to the current emission rates table being proposed? ☐ Yes ☐ No
<i>Note: If answers to all of the questions in Section V. Renewal Certification Option are "No," use the certification option and skip to Section VII. of this form. If the answers to any of the questions in Section V. Renewal Certification Option are "Yes," the certification option cannot be used.</i>
*If notice is applicable and comments are received in response to the public notice, the application does not qualify for the renewal certification option.

Form PI-1S
Registrations for Air Standard Permit
(Page 6)
Texas Commission on Environmental Quality

VI. Technical Information Including State and Federal Regulatory Requirements

Place a check next to the appropriate box to indicate what you have included in your submittal.

Note: Any technical or essential information needed to confirm that facilities are meeting the requirements of the standard permit must be provided. Not providing key information could result in an automatic deficiency and voiding of the project.

A. Standard Permit requirements
(Checklists are optional; however, your review will go faster if you provide applicable checklists.)

Did you demonstrate that the general requirements in 30 TAC Sections 116.610 and 116.615 are met? ☒ Yes ☐ No

Did you demonstrate that the individual requirements of the specific standard permit are met? ☒ Yes ☐ No

B. Confidential Information (All pages properly marked "CONFIDENTIAL"). ☐ Yes ☒ No

C. Process Flow Diagram. ☒ Yes ☐ No

D. Process Description. ☒ Yes ☐ No

E. Maximum Emissions Data and Calculations. ☒ Yes ☐ No

F. Plot Plan. ☒ Yes ☐ No

G. Projected Start Of Construction Date, Start Of Operation Date, and Length of Time at Site: ☒ Yes ☐ No

Projected Start of Construction (provide date): July, 2025

Projected Start of Operation (provide date): December, 2026

Length of Time at the Site: Permanent

VII. Delinquent Fees and Penalties

This form **will not be processed** until all delinquent fees and/or penalties owed to the TCEQ or the Office of the Attorney General on behalf of the TCEQ are paid in accordance with the Delinquent Fee and Penalty Protocol. For more information regarding Delinquent Fees and Penalties, go to the TCEQ website at: www.tceq.texas.gov/agency/financial/fees/delin/index.html.

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Registrations for Air Standard Permit
(Page 7)
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VIII. Signature Requirements

The signature below confirms that I have knowledge of the facts included in this application and that these facts are true and correct to the best of my knowledge and belief. I further state that to the best of my knowledge and belief, the project for which application is made will not in any way violate any provision of the Texas Water Code (TWC), Chapter 7; the Texas Health and Safety Code, Chapter 382, the Texas Clean Air Act (TCAA) the air quality rules of the Texas Commission on Environmental Quality; or any local governmental ordinance or resolution enacted pursuant to the TCAA. I further state that I understand my signature indicates that this application meets all applicable nonattainment, prevention of significant deterioration, or major source of hazardous air pollutant permitting requirements. The signature further signifies awareness that intentionally or knowingly making or causing to be made false material statements or representations in the application is a criminal offense subject to criminal penalties.

Name (printed): Jennifer Coleman

Signature (original signature required):

IX. Copies of the Registration

The PI-1S application must be submitted through ePermits. No additional copies need to be sent to the Regional Office or local Air Pollution Control Program(s). The link to ePermits can be found here:

www3.tceq.texas.gov/steers/.

**Table 1(a) Emission Point Summary
Air Contaminant Data (Page 1)
Texas Commission on Environmental Quality**

Date:	Permit No.:	Regulated Entity No.:	Area Name:	Customer Reference No.:
12/13/2024	167032	RN111366449	Elmax Power Station	CN606089365

Review of applications and issuance of permits will be expedited by supplying all necessary information requested on this Table.

EPN	FIN	Name	Component or Air Contaminant Name	Air Contaminant Emission Rate lb/hr	Air Contaminant Emission Rate TPY
CT-1	CT-1	Combustion Turbine 1	Normal Operating Emissions		
			NO _x	7.28	---
			CO	10.28	---
			VOC	3.60	---
			PM	5.88	---
			PM ₁₀	5.88	---
			PM _{2.5}	5.88	---
			SO ₂	1.43	---
			H ₂ SO ₄	0.66	---
			(NH ₄) ₂ SO ₄	0.88	---
			NH ₃	6.94	---
			MSS Emissions		
			NO _x	37.21	---
			CO	51.71	---
			VOC	3.64	---
			PM	5.88	---
			PM ₁₀	5.88	---
			PM _{2.5}	5.88	---
			SO ₂	1.43	---
			H ₂ SO ₄	0.66	---
			(NH ₄) ₂ SO ₄	0.88	---
			NH ₃	6.94	---
			Combined Normal and MSS Emissions		
			NO _x	---	8.90
			CO	---	12.51
			VOC	---	3.37
			PM	---	5.50
			PM ₁₀	---	5.50
			PM _{2.5}	---	5.50
			SO ₂	---	1.24
			H ₂ SO ₄	---	0.57
			(NH ₄) ₂ SO ₄	---	0.77
			NH ₃	---	6.50

**Table 1(a) Emission Point Summary
Air Contaminant Data (Page 1)
Texas Commission on Environmental Quality**

EPN	FIN	Name	Component or Air Contaminant Name	Air Contaminant Emission Rate lb/hr	Air Contaminant Emission Rate TPY
CT-2	CT-2	Combustion Turbine 2	Normal Operating Emissions		
			NO _x	7.28	---
			CO	10.28	---
			VOC	3.60	---
			PM	5.88	---
			PM ₁₀	5.88	---
			PM _{2.5}	5.88	---
			SO ₂	1.43	---
			H ₂ SO ₄	0.66	---
			(NH ₄) ₂ SO ₄	0.88	---
			NH ₃	6.94	---
			MSS Emissions		
			NO _x	37.21	---
			CO	51.71	---
			VOC	3.64	---
			PM	5.88	---
			PM ₁₀	5.88	---
			PM _{2.5}	5.88	---
			SO ₂	1.43	---
			H ₂ SO ₄	0.66	---
			(NH ₄) ₂ SO ₄	0.88	---
			NH ₃	6.94	---
			Combined Normal and MSS Emissions		
			NO _x	---	8.90
			CO	---	12.51
			VOC	---	3.37
			PM	---	5.50
			PM ₁₀	---	5.50
			PM _{2.5}	---	5.50
			SO ₂	---	1.24
			H ₂ SO ₄	---	0.57
			(NH ₄) ₂ SO ₄	---	0.77
			NH ₃	---	6.50

**Table 1(a) Emission Point Summary
Air Contaminant Data (Page 1)
Texas Commission on Environmental Quality**

EPN	FIN	Name	Component or Air Contaminant Name	Air Contaminant Emission Rate lb/hr	Air Contaminant Emission Rate TPY
CT-3	CT-3	Combustion Turbine 3	Normal Operating Emissions		
			NO _x	7.28	---
			CO	10.28	---
			VOC	3.60	---
			PM	5.88	---
			PM ₁₀	5.88	---
			PM _{2.5}	5.88	---
			SO ₂	1.43	---
			H ₂ SO ₄	0.66	---
			(NH ₄) ₂ SO ₄	0.88	---
			NH ₃	6.94	---
			MSS Emissions		
			NO _x	37.21	---
			CO	51.71	---
			VOC	3.64	---
			PM	5.88	---
			PM ₁₀	5.88	---
			PM _{2.5}	5.88	---
			SO ₂	1.43	---
			H ₂ SO ₄	0.66	---
			(NH ₄) ₂ SO ₄	0.88	---
			NH ₃	6.94	---
			Combined Normal and MSS Emissions		
			NO _x	---	8.90
			CO	---	12.51
			VOC	---	3.37
			PM	---	5.50
			PM ₁₀	---	5.50
			PM _{2.5}	---	5.50
			SO ₂	---	1.24
			H ₂ SO ₄	---	0.57
			(NH ₄) ₂ SO ₄	---	0.77
			NH ₃	---	6.50

**Table 1(a) Emission Point Summary
Air Contaminant Data (Page 1)
Texas Commission on Environmental Quality**

EPN	FIN	Name	Component or Air Contaminant Name	Air Contaminant Emission Rate lb/hr	Air Contaminant Emission Rate TPY
CT-4	CT-4	Combustion Turbine 4	Normal Operating Emissions		
			NO _x	7.28	---
			CO	10.28	---
			VOC	3.60	---
			PM	5.88	---
			PM ₁₀	5.88	---
			PM _{2.5}	5.88	---
			SO ₂	1.43	---
			H ₂ SO ₄	0.66	---
			(NH ₄) ₂ SO ₄	0.88	---
			NH ₃	6.94	---
			MSS Emissions		
			NO _x	37.21	---
			CO	51.71	---
			VOC	3.64	---
			PM	5.88	---
			PM ₁₀	5.88	---
			PM _{2.5}	5.88	---
			SO ₂	1.43	---
			H ₂ SO ₄	0.66	---
			(NH ₄) ₂ SO ₄	0.88	---
			NH ₃	6.94	---
			Combined Normal and MSS Emissions		
			NO _x	---	8.90
			CO	---	12.51
			VOC	---	3.37
			PM	---	5.50
			PM ₁₀	---	5.50
			PM _{2.5}	---	5.50
			SO ₂	---	1.24
			H ₂ SO ₄	---	0.57
			(NH ₄) ₂ SO ₄	---	0.77
			NH ₃	---	6.50

**Table 1(a) Emission Point Summary
Air Contaminant Data (Page 1)
Texas Commission on Environmental Quality**

EPN	FIN	Name	Component or Air Contaminant Name	Air Contaminant Emission Rate lb/hr	Air Contaminant Emission Rate TPY
CT-5	CT-5	Combustion Turbine 5	Normal Operating Emissions		
			NO _x	7.28	---
			CO	10.28	---
			VOC	3.60	---
			PM	5.88	---
			PM ₁₀	5.88	---
			PM _{2.5}	5.88	---
			SO ₂	1.43	---
			H ₂ SO ₄	0.66	---
			(NH ₄) ₂ SO ₄	0.88	---
			NH ₃	6.94	---
			MSS Emissions		
			NO _x	37.21	---
			CO	51.71	---
			VOC	3.64	---
			PM	5.88	---
			PM ₁₀	5.88	---
			PM _{2.5}	5.88	---
			SO ₂	1.43	---
			H ₂ SO ₄	0.66	---
			(NH ₄) ₂ SO ₄	0.88	---
			NH ₃	6.94	---
			Combined Normal and MSS Emissions		
			NO _x	---	8.90
			CO	---	12.51
			VOC	---	3.37
			PM	---	5.50
			PM ₁₀	---	5.50
			PM _{2.5}	---	5.50
			SO ₂	---	1.24
			H ₂ SO ₄	---	0.57
			(NH ₄) ₂ SO ₄	---	0.77
			NH ₃	---	6.50

**Table 1(a) Emission Point Summary
Air Contaminant Data (Page 1)
Texas Commission on Environmental Quality**

EPN	FIN	Name	Component or Air Contaminant Name	Air Contaminant Emission Rate lb/hr	Air Contaminant Emission Rate TPY
CT-6	CT-6	Combustion Turbine 6	Normal Operating Emissions		
			NO _x	7.28	---
			CO	10.28	---
			VOC	3.60	---
			PM	5.88	---
			PM ₁₀	5.88	---
			PM _{2.5}	5.88	---
			SO ₂	1.43	---
			H ₂ SO ₄	0.66	---
			(NH ₄) ₂ SO ₄	0.88	---
			NH ₃	6.94	---
			MSS Emissions		
			NO _x	37.21	---
			CO	51.71	---
			VOC	3.64	---
			PM	5.88	---
			PM ₁₀	5.88	---
			PM _{2.5}	5.88	---
			SO ₂	1.43	---
			H ₂ SO ₄	0.66	---
			(NH ₄) ₂ SO ₄	0.88	---
			NH ₃	6.94	---
			Combined Normal and MSS Emissions		
			NO _x	---	8.90
			CO	---	12.51
			VOC	---	3.37
			PM	---	5.50
			PM ₁₀	---	5.50
			PM _{2.5}	---	5.50
			SO ₂	---	1.24
			H ₂ SO ₄	---	0.57
			(NH ₄) ₂ SO ₄	---	0.77
			NH ₃	---	6.50

**Table 1(a) Emission Point Summary
Air Contaminant Data (Page 1)
Texas Commission on Environmental Quality**

EPN	FIN	Name	Component or Air Contaminant Name	Air Contaminant Emission Rate lb/hr	Air Contaminant Emission Rate TPY
CT-7	CT-7	Combustion Turbine 7	Normal Operating Emissions		
			NO _x	7.28	---
			CO	10.28	---
			VOC	3.60	---
			PM	5.88	---
			PM ₁₀	5.88	---
			PM _{2.5}	5.88	---
			SO ₂	1.43	---
			H ₂ SO ₄	0.66	---
			(NH ₄) ₂ SO ₄	0.88	---
			NH ₃	6.94	---
			MSS Emissions		
			NO _x	37.21	---
			CO	51.71	---
			VOC	3.64	---
			PM	5.88	---
			PM ₁₀	5.88	---
			PM _{2.5}	5.88	---
			SO ₂	1.43	---
			H ₂ SO ₄	0.66	---
			(NH ₄) ₂ SO ₄	0.88	---
			NH ₃	6.94	---
			Combined Normal and MSS Emissions		
			NO _x	---	8.90
			CO	---	12.51
			VOC	---	3.37
			PM	---	5.50
			PM ₁₀	---	5.50
			PM _{2.5}	---	5.50
			SO ₂	---	1.24
			H ₂ SO ₄	---	0.57
			(NH ₄) ₂ SO ₄	---	0.77
			NH ₃	---	6.50

**Table 1(a) Emission Point Summary
Air Contaminant Data (Page 1)
Texas Commission on Environmental Quality**

EPN	FIN	Name	Component or Air Contaminant Name	Air Contaminant Emission Rate lb/hr	Air Contaminant Emission Rate TPY
CT-8	CT-8	Combustion Turbine 8	Normal Operating Emissions		
			NO _x	7.28	---
			CO	10.28	---
			VOC	3.60	---
			PM	5.88	---
			PM ₁₀	5.88	---
			PM _{2.5}	5.88	---
			SO ₂	1.43	---
			H ₂ SO ₄	0.66	---
			(NH ₄) ₂ SO ₄	0.88	---
			NH ₃	6.94	---
			MSS Emissions		
			NO _x	37.21	---
			CO	51.71	---
			VOC	3.64	---
			PM	5.88	---
			PM ₁₀	5.88	---
			PM _{2.5}	5.88	---
			SO ₂	1.43	---
			H ₂ SO ₄	0.66	---
			(NH ₄) ₂ SO ₄	0.88	---
			NH ₃	6.94	---
			Combined Normal and MSS Emissions		
			NO _x	---	8.90
			CO	---	12.51
			VOC	---	3.37
			PM	---	5.50
			PM ₁₀	---	5.50
			PM _{2.5}	---	5.50
			SO ₂	---	1.24
			H ₂ SO ₄	---	0.57
			(NH ₄) ₂ SO ₄	---	0.77
			NH ₃	---	6.50

**Table 1(a) Emission Point Summary
Air Contaminant Data (Page 1)
Texas Commission on Environmental Quality**

EPN	FIN	Name	Component or Air Contaminant Name	Air Contaminant Emission Rate lb/hr	Air Contaminant Emission Rate TPY
CT-9	CT-9	Combustion Turbine 9	Normal Operating Emissions		
			NO _x	7.28	---
			CO	10.28	---
			VOC	3.60	---
			PM	5.88	---
			PM ₁₀	5.88	---
			PM _{2.5}	5.88	---
			SO ₂	1.43	---
			H ₂ SO ₄	0.66	---
			(NH ₄) ₂ SO ₄	0.88	---
			NH ₃	6.94	---
			MSS Emissions		
			NO _x	37.21	---
			CO	51.71	---
			VOC	3.64	---
			PM	5.88	---
			PM ₁₀	5.88	---
			PM _{2.5}	5.88	---
			SO ₂	1.43	---
			H ₂ SO ₄	0.66	---
			(NH ₄) ₂ SO ₄	0.88	---
			NH ₃	6.94	---
			Combined Normal and MSS Emissions		
			NO _x	---	8.90
			CO	---	12.51
			VOC	---	3.37
			PM	---	5.50
			PM ₁₀	---	5.50
			PM _{2.5}	---	5.50
			SO ₂	---	1.24
			H ₂ SO ₄	---	0.57
			(NH ₄) ₂ SO ₄	---	0.77
			NH ₃	---	6.50

**Table 1(a) Emission Point Summary
Air Contaminant Data (Page 1)
Texas Commission on Environmental Quality**

EPN	FIN	Name	Component or Air Contaminant Name	Air Contaminant Emission Rate lb/hr	Air Contaminant Emission Rate TPY
CT-10	CT-10	Combustion Turbine 10	Normal Operating Emissions		
			NO _x	7.28	---
			CO	10.28	---
			VOC	3.60	---
			PM	5.88	---
			PM ₁₀	5.88	---
			PM _{2.5}	5.88	---
			SO ₂	1.43	---
			H ₂ SO ₄	0.66	---
			(NH ₄) ₂ SO ₄	0.88	---
			NH ₃	6.94	---
			MSS Emissions		
			NO _x	37.21	---
			CO	51.71	---
			VOC	3.64	---
			PM	5.88	---
			PM ₁₀	5.88	---
			PM _{2.5}	5.88	---
			SO ₂	1.43	---
			H ₂ SO ₄	0.66	---
			(NH ₄) ₂ SO ₄	0.88	---
			NH ₃	6.94	---
			Combined Normal and MSS Emissions		
			NO _x	---	8.90
			CO	---	12.51
			VOC	---	3.37
			PM	---	5.50
			PM ₁₀	---	5.50
			PM _{2.5}	---	5.50
			SO ₂	---	1.24
			H ₂ SO ₄	---	0.57
			(NH ₄) ₂ SO ₄	---	0.77
			NH ₃	---	6.50

**Table 1(a) Emission Point Summary
Air Contaminant Data (Page 1)
Texas Commission on Environmental Quality**

EPN	FIN	Name	Component or Air Contaminant Name	Air Contaminant Emission Rate lb/hr	Air Contaminant Emission Rate TPY
CT-1 through CT-10	CT-1 through CT-10	Annual Emissions Cap for	NO _x	---	49.70
		Combustion Turbine 1 through	CO	---	102.03
		Combustion Turbine 10	VOC	---	25.62
			PM	---	44.19
			PM ₁₀	---	44.19
			PM _{2.5}	---	44.19
			SO ₂	---	10.14
			H ₂ SO ₄	---	4.66
			(NH ₄) ₂ SO ₄	---	6.27
			NH ₃	---	49.29
CT-LOV-1	CT-LO-1	Combustion Turbine 1 Lube Oil Vent	VOC	0.03	0.13
			PM	0.03	0.13
			PM ₁₀	0.03	0.13
			PM _{2.5}	0.03	0.13
CT-LOV-2	CT-LO-2	Combustion Turbine 2 Lube Oil Vent	VOC	0.03	0.13
			PM	0.03	0.13
			PM ₁₀	0.03	0.13
			PM _{2.5}	0.03	0.13
CT-LOV-3	CT-LO-3	Combustion Turbine 3 Lube Oil Vent	VOC	0.03	0.13
			PM	0.03	0.13
			PM ₁₀	0.03	0.13
			PM _{2.5}	0.03	0.13
CT-LOV-4	CT-LO-4	Combustion Turbine 4 Lube Oil Vent	VOC	0.03	0.13
			PM	0.03	0.13
			PM ₁₀	0.03	0.13
			PM _{2.5}	0.03	0.13
CT-LOV-5	CT-LO-5	Combustion Turbine 5 Lube Oil Vent	VOC	0.03	0.13
			PM	0.03	0.13
			PM ₁₀	0.03	0.13
			PM _{2.5}	0.03	0.13
CT-LOV-6	CT-LO-6	Combustion Turbine 6 Lube Oil Vent	VOC	0.03	0.13
			PM	0.03	0.13
			PM ₁₀	0.03	0.13
			PM _{2.5}	0.03	0.13
CT-LOV-7	CT-LO-7	Combustion Turbine 7 Lube Oil Vent	VOC	0.03	0.13
			PM	0.03	0.13
			PM ₁₀	0.03	0.13
			PM _{2.5}	0.03	0.13
CT-LOV-8	CT-LO-8	Combustion Turbine 8 Lube Oil Vent	VOC	0.03	0.13
			PM	0.03	0.13
			PM ₁₀	0.03	0.13
			PM _{2.5}	0.03	0.13

**Table 1(a) Emission Point Summary
Air Contaminant Data (Page 1)
Texas Commission on Environmental Quality**

EPN	FIN	Name	Component or Air Contaminant Name	Air Contaminant Emission Rate lb/hr	Air Contaminant Emission Rate TPY
CT-LOV-9	CT-LO-9	Combustion Turbine 9 Lube Oil Vent	VOC	0.03	0.13
			PM	0.03	0.13
			PM ₁₀	0.03	0.13
			PM _{2.5}	0.03	0.13
CT-LOV-10	CT-LO-10	Combustion Turbine 10 Lube Oil Vent	VOC	0.03	0.13
			PM	0.03	0.13
			PM ₁₀	0.03	0.13
			PM _{2.5}	0.03	0.13
GEN-LOV-1	GEN-LO-1	Generator 1 Lube Oil Vent	VOC	0.03	0.13
			PM	0.03	0.13
			PM ₁₀	0.03	0.13
			PM _{2.5}	0.03	0.13
GEN-LOV-2	GEN-LO-2	Generator 2 Lube Oil Vent	VOC	0.03	0.13
			PM	0.03	0.13
			PM ₁₀	0.03	0.13
			PM _{2.5}	0.03	0.13
GEN-LOV-3	GEN-LO-3	Generator 3 Lube Oil Vent	VOC	0.03	0.13
			PM	0.03	0.13
			PM ₁₀	0.03	0.13
			PM _{2.5}	0.03	0.13
GEN-LOV-4	GEN-LO-4	Generator 4 Lube Oil Vent	VOC	0.03	0.13
			PM	0.03	0.13
			PM ₁₀	0.03	0.13
			PM _{2.5}	0.03	0.13
GEN-LOV-5	GEN-LO-5	Generator 5 Lube Oil Vent	VOC	0.03	0.13
			PM	0.03	0.13
			PM ₁₀	0.03	0.13
			PM _{2.5}	0.03	0.13
GEN-LOV-6	GEN-LO-6	Generator 6 Lube Oil Vent	VOC	0.03	0.13
			PM	0.03	0.13
			PM ₁₀	0.03	0.13
			PM _{2.5}	0.03	0.13
GEN-LOV-7	GEN-LO-7	Generator 7 Lube Oil Vent	VOC	0.03	0.13
			PM	0.03	0.13
			PM ₁₀	0.03	0.13
			PM _{2.5}	0.03	0.13
GEN-LOV-8	GEN-LO-8	Generator 8 Lube Oil Vent	VOC	0.03	0.13
			PM	0.03	0.13
			PM ₁₀	0.03	0.13
			PM _{2.5}	0.03	0.13

**Table 1(a) Emission Point Summary
Air Contaminant Data (Page 1)
Texas Commission on Environmental Quality**

EPN	FIN	Name	Component or Air Contaminant Name	Air Contaminant Emission Rate lb/hr	Air Contaminant Emission Rate TPY
GEN-LOV-9	GEN-LO-9	Generator 9 Lube Oil Vent	VOC	0.03	0.13
			PM	0.03	0.13
			PM ₁₀	0.03	0.13
			PM _{2.5}	0.03	0.13
GEN-LOV-10	GEN-LO-10	Generator 10 Lube Oil Vent	VOC	0.03	0.13
			PM	0.03	0.13
			PM ₁₀	0.03	0.13
			PM _{2.5}	0.03	0.13
HYD-OV-1	HYD-O-1	Unit 1 Hydraulic Oil Vent	VOC	0.03	0.13
			PM	0.03	0.13
			PM ₁₀	0.03	0.13
			PM _{2.5}	0.03	0.13
HYD-OV-2	HYD-O-2	Unit 2 Hydraulic Oil Vent	VOC	0.03	0.13
			PM	0.03	0.13
			PM ₁₀	0.03	0.13
			PM _{2.5}	0.03	0.13
HYD-OV-3	HYD-O-3	Unit 3 Hydraulic Oil Vent	VOC	0.03	0.13
			PM	0.03	0.13
			PM ₁₀	0.03	0.13
			PM _{2.5}	0.03	0.13
HYD-OV-4	HYD-O-4	Unit 4 Hydraulic Oil Vent	VOC	0.03	0.13
			PM	0.03	0.13
			PM ₁₀	0.03	0.13
			PM _{2.5}	0.03	0.13
HYD-OV-5	HYD-O-5	Unit 5 Hydraulic Oil Vent	VOC	0.03	0.13
			PM	0.03	0.13
			PM ₁₀	0.03	0.13
			PM _{2.5}	0.03	0.13
HYD-OV-6	HYD-O-6	Unit 6 Hydraulic Oil Vent	VOC	0.03	0.13
			PM	0.03	0.13
			PM ₁₀	0.03	0.13
			PM _{2.5}	0.03	0.13
HYD-OV-7	HYD-O-7	Unit 7 Hydraulic Oil Vent	VOC	0.03	0.13
			PM	0.03	0.13
			PM ₁₀	0.03	0.13
			PM _{2.5}	0.03	0.13
HYD-OV-8	HYD-O-8	Unit 8 Hydraulic Oil Vent	VOC	0.03	0.13
			PM	0.03	0.13
			PM ₁₀	0.03	0.13
			PM _{2.5}	0.03	0.13

**Table 1(a) Emission Point Summary
Air Contaminant Data (Page 1)
Texas Commission on Environmental Quality**

EPN	FIN	Name	Component or Air Contaminant Name	Air Contaminant Emission Rate lb/hr	Air Contaminant Emission Rate TPY
HYD-OV-9	HYD-O-9	Unit 9 Hydraulic Oil Vent	VOC	0.03	0.13
			PM	0.03	0.13
			PM ₁₀	0.03	0.13
			PM _{2.5}	0.03	0.13
HYD-OV-10	HYD-O-10	Unit 10 Hydraulic Oil Vent	VOC	0.03	0.13
			PM	0.03	0.13
			PM ₁₀	0.03	0.13
			PM _{2.5}	0.03	0.13
VOC-FUG	VOC-FUG	VOC Fugitives	VOC	0.87	3.83
NH3-FUG	NH3-FUG	Ammonia Fugitives	NH ₃	5.98	26.18
CT-MSS	CT-MSS	ILE Turbine Maintenance	VOC	0.85	0.03
			PM	5.72	1.20
			PM ₁₀	5.72	1.19
			PM _{2.5}	5.72	1.19
			NH ₃	0.04	<0.01

**Table 1(a) Emission Point Summary
Air Contaminant Data (Page 2)
Texas Commission on Environmental Quality**

Date:	Permit No.:	Regulated Entity No.:	Area Name:	Customer Reference No.:
12/13/2024	167032	RN111366449	Elmax Power Station	CN606089365

Review of applications and issuance of permits will be expedited by supplying all necessary information requested on this Table.

EPN	FIN	NAME	UTM Coordinates of Emission Point			Emission Point Discharge Parameters		Stack Exit Data			Fugitives		
			Zone	East (Meters)	North (Meters)	Building Height (ft.)	Height Above Ground (ft.)	Diameter (ft.)	Velocity (fps)	Temperature (°F)	Length (ft.)	Width (ft.)	Axis Degrees
CT-1	CT-1	Combustion Turbine 1	15	297,981	3,322,756		65	10.0	122.0	850			
CT-2	CT-2	Combustion Turbine 2	15	297,954	3,322,756		65	10.0	122.0	850			
CT-3	CT-3	Combustion Turbine 3	15	297,927	3,322,756		65	10.0	122.0	850			
CT-4	CT-4	Combustion Turbine 4	15	297,901	3,322,756		65	10.0	122.0	850			
CT-5	CT-5	Combustion Turbine 5	15	297,874	3,322,756		65	10.0	122.0	850			
CT-6	CT-6	Combustion Turbine 6	15	297,847	3,322,756		65	10.0	122.0	850			
CT-7	CT-7	Combustion Turbine 7	15	297,820	3,322,756		65	10.0	122.0	850			
CT-8	CT-8	Combustion Turbine 8	15	297,794	3,322,756		65	10.0	122.0	850			
CT-9	CT-9	Combustion Turbine 9	15	297,767	3,322,756		65	10.0	122.0	850			
CT-10	CT-10	Combustion Turbine 10	15	297,740	3,322,756		65	10.0	122.0	850			
CT-LOV-1	CT-LO-1	Combustion Turbine 1 Lube Oil Vent	15	297,978	3,322,737		20	0.003	0.003	115			
CT-LOV-2	CT-LO-2	Combustion Turbine 2 Lube Oil Vent	15	297,951	3,322,737		20	0.003	0.003	115			
CT-LOV-3	CT-LO-3	Combustion Turbine 3 Lube Oil Vent	15	297,924	3,322,737		20	0.003	0.003	115			
CT-LOV-4	CT-LO-4	Combustion Turbine 4 Lube Oil Vent	15	297,898	3,322,737		20	0.003	0.003	115			
CT-LOV-5	CT-LO-5	Combustion Turbine 5 Lube Oil Vent	15	297,871	3,322,737		20	0.003	0.003	115			
CT-LOV-6	CT-LO-6	Combustion Turbine 6 Lube Oil Vent	15	297,844	3,322,737		20	0.003	0.003	115			
CT-LOV-7	CT-LO-7	Combustion Turbine 7 Lube Oil Vent	15	297,817	3,322,737		20	0.003	0.003	115			
CT-LOV-8	CT-LO-8	Combustion Turbine 8 Lube Oil Vent	15	297,791	3,322,737		20	0.003	0.003	115			
CT-LOV-9	CT-LO-9	Combustion Turbine 9 Lube Oil Vent	15	297,764	3,322,737		20	0.003	0.003	115			
CT-LOV-10	CT-LO-10	Combustion Turbine 10 Lube Oil Vent	15	297,737	3,322,737		20	0.003	0.003	115			
GEN-LOV-1	GEN-LO-1	Generator 1 Lube Oil Vent	15	297,981	3,322,720		20	0.003	0.003	115			
GEN-LOV-2	GEN-LO-2	Generator 2 Lube Oil Vent	15	297,954	3,322,720		20	0.003	0.003	115			
GEN-LOV-3	GEN-LO-3	Generator 3 Lube Oil Vent	15	297,927	3,322,720		20	0.003	0.003	115			
GEN-LOV-4	GEN-LO-4	Generator 4 Lube Oil Vent	15	297,901	3,322,720		20	0.003	0.003	115			
GEN-LOV-5	GEN-LO-5	Generator 5 Lube Oil Vent	15	297,874	3,322,720		20	0.003	0.003	115			
GEN-LOV-6	GEN-LO-6	Generator 6 Lube Oil Vent	15	297,847	3,322,720		20	0.003	0.003	115			
GEN-LOV-7	GEN-LO-7	Generator 7 Lube Oil Vent	15	297,820	3,322,720		20	0.003	0.003	115			
GEN-LOV-8	GEN-LO-8	Generator 8 Lube Oil Vent	15	297,794	3,322,720		20	0.003	0.003	115			
GEN-LOV-9	GEN-LO-9	Generator 9 Lube Oil Vent	15	297,767	3,322,720		20	0.003	0.003	115			
GEN-LOV-10	GEN-LO-10	Generator 10 Lube Oil Vent	15	297,740	3,322,720		20	0.003	0.003	115			
HYD-OV-1	HYD-O-1	Unit 1 Hydraulic Oil Vent	15	297,977	3,322,738		20	0.003	0.003	115			
HYD-OV-2	HYD-O-2	Unit 2 Hydraulic Oil Vent	15	297,950	3,322,738		20	0.003	0.003	115			
HYD-OV-3	HYD-O-3	Unit 3 Hydraulic Oil Vent	15	297,923	3,322,738		20	0.003	0.003	115			
HYD-OV-4	HYD-O-4	Unit 4 Hydraulic Oil Vent	15	297,897	3,322,738		20	0.003	0.003	115			
HYD-OV-5	HYD-O-5	Unit 5 Hydraulic Oil Vent	15	297,870	3,322,738		20	0.003	0.003	115			

**Table 1(a) Emission Point Summary
Air Contaminant Data (Page 2)
Texas Commission on Environmental Quality**

EPN	FIN	NAME	UTM Coordinates of Emission Point			Emission Point Discharge Parameters		Stack Exit Data			Fugitives		
			Zone	East (Meters)	North (Meters)	Building Height (ft.)	Height Above Ground (ft.)	Diameter (ft.)	Velocity (fps)	Temperature (°F)	Length (ft.)	Width (ft.)	Axis Degrees
HYD-OV-6	HYD-O-6	Unit 6 Hydraulic Oil Vent	15	297,843	3,322,738		20	0.003	0.003	115			
HYD-OV-7	HYD-O-7	Unit 7 Hydraulic Oil Vent	15	297,816	3,322,738		20	0.003	0.003	115			
HYD-OV-8	HYD-O-8	Unit 8 Hydraulic Oil Vent	15	297,790	3,322,738		20	0.003	0.003	115			
HYD-OV-9	HYD-O-9	Unit 9 Hydraulic Oil Vent	15	297,763	3,322,738		20	0.003	0.003	115			
HYD-OV-10	HYD-O-10	Unit 10 Hydraulic Oil Vent	15	297,736	3,322,738		20	0.003	0.003	115			
VOC-FUG	VOC-FUG	VOC Fugitives	15	297,722	3,322,710						1,000	150	90.0
NH3-FUG	NH3-FUG	Ammonia Fugitives	15	297,722	3,322,710						1,000	150	90.0
CT-MSS	CT-MSS	ILE Turbine Maintenance	15	297,722	3,322,710						1,000	150	90.0

Table 1F
Air Quality Application Supplement
Texas Commission on Environmental Quality

Permit Number:	167032
Application Submittal Date:	12/13/2024
Company	Elmax Generating, LLC
Regulated Entity Number:	RN111366449
Named Source (Y/N)	☐ Yes ☒ No
City	Texas City
County:	Galveston County
Permit Activity:	☒ New Source ☐ Modification (Retrospective review)

Complete for all pollutants with a project emission increase

Questions	Ozone VOC	Ozone NOx	CO	PM	PM ₁₀	PM _{2.5}	SO ₂	H ₂ SO ₄
Is nonattainment potentially applicable? (Y/N)	Yes	Yes	No	No	No	No	No	No
Is PSD potentially applicable? (Y/N)	No	No	Yes	Yes	Yes	Yes	Yes	Yes
Existing site PTE (tpy)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total project emissions increase (tpy from Table 2F)?	33.5	49.7	102.0	49.4	49.4	49.4	10.1	4.7
Is the existing site a major source? (Y/N)	No	No	No	No	No	No	No	No
If not, is the project a major source by itself? (Y/N)	No	No	No	No	No	No	No	No
If site is major source, is the project increase significant? (Y/N)								
Net contemporaneous change, including proposed project, from Table 3F (tpy)								
Major NSR Applicable? (Y/N)	No	No	No	No	No	No	No	No

If netting required, estimated start of construction date (MM/DD/YR):	
Beginning of Contemporaneous Period, 5 years prior to start of construction (MM/DD/YR):	
End of Contemporaneous Period, the start of operation date (MM/DD/YR):	

Table 2F
Project Emissions Increase Supplement
Texas Commission on Environmental Quality

Pollutant¹:	NOx
Permit:	
Baseline Period (Month and Year):	No baseline as this is a new facility
To Baseline Period (Month and Year):	No baseline as this is a new facility

New, Affected, or Modified Facilities²

Item Number	FIN	EPN	Permit Number	Actual Emissions³	A Baseline Emissions⁴	B Proposed Potential to Emit Emissions⁵	C Projected Actual Emissions⁶	Difference, (B-A) or (C-A)⁷	Correction⁸	Project Emissions Increases⁹
1	CT-1 CT-2 CT-3 CT-4 CT-5 CT-6 CT-7 CT-8 CT-9 CT-10	CT-1 CT-2 CT-3 CT-4 CT-5 CT-6 CT-7 CT-8 CT-9 CT-10	167032	0.00	0.00	49.70		49.70		49.70
2										
3										
4										
5										
6										
7										
8										
9										
10										
11										
12										
Total Project Emissions Increase										49.70

Table 2F
Project Emissions Increase Supplement
Texas Commission on Environmental Quality

Pollutant¹:	VOC
Permit:	
Baseline Period (Month and Year):	No baseline as this is a new facility
To Baseline Period (Month and Year):	No baseline as this is a new facility

New, Affected, or Modified Facilities²

Item Number	FIN	EPN	Permit Number	Actual Emissions³	A Baseline Emissions⁴	B Proposed Potential to Emit Emissions⁵	C Projected Actual Emissions⁶	Difference, (B-A) or (C-A)⁷	Correction⁸	Project Emissions Increases⁹
1	CT-1 CT-2 CT-3 CT-4 CT-5 CT-6 CT-7 CT-8 CT-9 CT-10	CT-1 CT-2 CT-3 CT-4 CT-5 CT-6 CT-7 CT-8 CT-9 CT-10	167032	0.00	0.00	25.62		25.62		25.62
2	CT-LO-1	CT-LOV-1	167032	0.00	0.00	0.13		0.13		0.13
3	CT-LO-2	CT-LOV-2	167032	0.00	0.00	0.13		0.13		0.13
4	CT-LO-3	CT-LOV-3	167032	0.00	0.00	0.13		0.13		0.13
5	CT-LO-4	CT-LOV-4	167032	0.00	0.00	0.13		0.13		0.13
6	CT-LO-5	CT-LOV-5	167032	0.00	0.00	0.13		0.13		0.13
7	CT-LO-6	CT-LOV-6	167032	0.00	0.00	0.13		0.13		0.13
8	CT-LO-7	CT-LOV-7	167032	0.00	0.00	0.13		0.13		0.13
9	CT-LO-8	CT-LOV-8	167032	0.00	0.00	0.13		0.13		0.13
10	CT-LO-9	CT-LOV-9	167032	0.00	0.00	0.13		0.13		0.13
11	CT-LO-10	CT-LOV-10	167032	0.00	0.00	0.13		0.13		0.13
12	GEN-LO-1	GEN-LOV-1	167032	0.00	0.00	0.13		0.13		0.13

Table 2F
Project Emissions Increase Supplement
Texas Commission on Environmental Quality

Pollutant¹:	VOC
Permit:	
Baseline Period (Month and Year):	No baseline as this is a new facility
To Baseline Period (Month and Year):	No baseline as this is a new facility

New, Affected, or Modified Facilities²

Item Number	FIN	EPN	Permit Number	Actual Emissions³	A Baseline Emissions⁴	B Proposed Potential to Emit Emissions⁵	C Projected Actual Emissions⁶	Difference, (B-A) or (C-A)⁷	Correction⁸	Project Emissions Increases⁹
13	GEN-LO-2	GEN-LOV-2	167032	0.00	0.00	0.13		0.13		0.13
14	GEN-LO-3	GEN-LOV-3	167032	0.00	0.00	0.13		0.13		0.13
15	GEN-LO-4	GEN-LOV-4	167032	0.00	0.00	0.13		0.13		0.13
16	GEN-LO-5	GEN-LOV-5	167032	0.00	0.00	0.13		0.13		0.13
17	GEN-LO-6	GEN-LOV-6	167032	0.00	0.00	0.13		0.13		0.13
18	GEN-LO-7	GEN-LOV-7	167032	0.00	0.00	0.13		0.13		0.13
19	GEN-LO-8	GEN-LOV-8	167032	0.00	0.00	0.13		0.13		0.13
20	GEN-LO-9	GEN-LOV-9	167032	0.00	0.00	0.13		0.13		0.13
21	GEN-LO-10	GEN-LOV-10	167032	0.00	0.00	0.13		0.13		0.13
22	HYD-O-1	HYD-OV-1	167032	0.00	0.00	0.13		0.13		0.13
23	HYD-O-2	HYD-OV-2	167032	0.00	0.00	0.13		0.13		0.13
24	HYD-O-3	HYD-OV-3	167032	0.00	0.00	0.13		0.13		0.13
25	HYD-O-4	HYD-OV-4	167032	0.00	0.00	0.13		0.13		0.13
26	HYD-O-5	HYD-OV-5	167032	0.00	0.00	0.13		0.13		0.13
27	HYD-O-6	HYD-OV-6	167032	0.00	0.00	0.13		0.13		0.13
28	HYD-O-7	HYD-OV-7	167032	0.00	0.00	0.13		0.13		0.13
29	HYD-O-8	HYD-OV-8	167032	0.00	0.00	0.13		0.13		0.13
30	HYD-O-9	HYD-OV-9	167032	0.00	0.00	0.13		0.13		0.13

Table 2F
Project Emissions Increase Supplement
Texas Commission on Environmental Quality

Pollutant¹:	VOC
Permit:	
Baseline Period (Month and Year):	No baseline as this is a new facility
To Baseline Period (Month and Year):	No baseline as this is a new facility

New, Affected, or Modified Facilities²

Item Number	FIN	EPN	Permit Number	Actual Emissions³	A Baseline Emissions⁴	B Proposed Potential to Emit Emissions⁵	C Projected Actual Emissions⁶	Difference, (B-A) or (C-A)⁷	Correction⁸	Project Emissions Increases⁹
31	HYD-O-10	HYD-OV-10	167032	0.00	0.00	0.00		0.00		0.00
32	VOC-FUG	VOC-FUG	167032	0.00	0.00	3.83		3.83		3.83
33	CT-MSS	CT-MSS	167032	0.00	0.00	0.03		0.03		0.03
34	GEN-LO-8	GEN-LOV-8	167032	0.00	0.00	0.13		0.13		0.13
35										
36										
37										
38										
39										
40										
41										
42										
43										
44										
45										
46										
47										
Total Project Emissions Increase										33.46

Table 2F
Project Emissions Increase Supplement
Texas Commission on Environmental Quality

Pollutant¹:	CO
Permit:	
Baseline Period (Month and Year):	No baseline as this is a new facility
To Baseline Period (Month and Year):	No baseline as this is a new facility

New, Affected, or Modified Facilities²

Item Number	FIN	EPN	Permit Number	Actual Emissions³	A Baseline Emissions⁴	B Proposed Potential to Emit Emissions⁵	C Projected Actual Emissions⁶	Difference, (B-A) or (C-A)⁷	Correction⁸	Project Emissions Increases⁹
1	CT-1 CT-2 CT-3 CT-4 CT-5 CT-6 CT-7 CT-8 CT-9 CT-10	CT-1 CT-2 CT-3 CT-4 CT-5 CT-6 CT-7 CT-8 CT-9 CT-10	167032	0.00	0.00	102.03		102.03		102.03
2										
3										
4										
5										
6										
7										
8										
9										
10										
11										
12										
Total Project Emissions Increase										102.03

Table 2F
Project Emissions Increase Supplement
Texas Commission on Environmental Quality

Pollutant¹:	SO2
Permit:	
Baseline Period (Month and Year):	No baseline as this is a new facility
To Baseline Period (Month and Year):	No baseline as this is a new facility

New, Affected, or Modified Facilities²

Item Number	FIN	EPN	Permit Number	Actual Emissions ³	A Baseline Emissions ⁴	B Proposed Potential to Emit Emissions ⁵	C Projected Actual Emissions ⁶	Difference, (B-A) or (C-A) ⁷	Correction ⁸	Project Emissions Increases ⁹
1	CT-1 CT-2 CT-3 CT-4 CT-5 CT-6 CT-7 CT-8 CT-9 CT-10	CT-1 CT-2 CT-3 CT-4 CT-5 CT-6 CT-7 CT-8 CT-9 CT-10	167032	0.00	0.00	10.14		10.14		10.14
2										
3										
4										
5										
6										
7										
8										
9										
10										
11										
12										
Total Project Emissions Increase										10.14

Table 2F
Project Emissions Increase Supplement
Texas Commission on Environmental Quality

Pollutant¹:	PM
Permit:	
Baseline Period (Month and Year):	No baseline as this is a new facility
To Baseline Period (Month and Year):	No baseline as this is a new facility

New, Affected, or Modified Facilities²

Item Number	FIN	EPN	Permit Number	Actual Emissions³	A Baseline Emissions⁴	B Proposed Potential to Emit Emissions⁵	C Projected Actual Emissions⁶	Difference, (B-A) or (C-A)⁷	Correction⁸	Project Emissions Increases⁹
1	CT-1 CT-2 CT-3 CT-4 CT-5 CT-6 CT-7 CT-8 CT-9 CT-10	CT-1 CT-2 CT-3 CT-4 CT-5 CT-6 CT-7 CT-8 CT-9 CT-10	167032	0.00	0.00	44.19		44.19		44.19
2	CT-LO-1	CT-LOV-1	167032	0.00	0.00	0.13		0.13		0.13
3	CT-LO-2	CT-LOV-2	167032	0.00	0.00	0.13		0.13		0.13
4	CT-LO-3	CT-LOV-3	167032	0.00	0.00	0.13		0.13		0.13
5	CT-LO-4	CT-LOV-4	167032	0.00	0.00	0.13		0.13		0.13
6	CT-LO-5	CT-LOV-5	167032	0.00	0.00	0.13		0.13		0.13
7	CT-LO-6	CT-LOV-6	167032	0.00	0.00	0.13		0.13		0.13
8	CT-LO-7	CT-LOV-7	167032	0.00	0.00	0.13		0.13		0.13
9	CT-LO-8	CT-LOV-8	167032	0.00	0.00	0.13		0.13		0.13
10	CT-LO-9	CT-LOV-9	167032	0.00	0.00	0.13		0.13		0.13
11	CT-LO-10	CT-LOV-10	167032	0.00	0.00	0.13		0.13		0.13
12	GEN-LO-1	GEN-LOV-1	167032	0.00	0.00	0.13		0.13		0.13

Table 2F
Project Emissions Increase Supplement
Texas Commission on Environmental Quality

Pollutant¹:	PM
Permit:	
Baseline Period (Month and Year):	No baseline as this is a new facility
To Baseline Period (Month and Year):	No baseline as this is a new facility

New, Affected, or Modified Facilities²

Item Number	FIN	EPN	Permit Number	Actual Emissions³	A Baseline Emissions⁴	B Proposed Potential to Emit Emissions⁵	C Projected Actual Emissions⁶	Difference, (B-A) or (C-A)⁷	Correction⁸	Project Emissions Increases⁹
13	GEN-LO-2	GEN-LOV-2	167032	0.00	0.00	0.13		0.13		0.13
14	GEN-LO-3	GEN-LOV-3	167032	0.00	0.00	0.13		0.13		0.13
15	GEN-LO-4	GEN-LOV-4	167032	0.00	0.00	0.13		0.13		0.13
16	GEN-LO-5	GEN-LOV-5	167032	0.00	0.00	0.13		0.13		0.13
17	GEN-LO-6	GEN-LOV-6	167032	0.00	0.00	0.13		0.13		0.13
18	GEN-LO-7	GEN-LOV-7	167032	0.00	0.00	0.13		0.13		0.13
19	GEN-LO-8	GEN-LOV-8	167032	0.00	0.00	0.13		0.13		0.13
20	GEN-LO-9	GEN-LOV-9	167032	0.00	0.00	0.13		0.13		0.13
21	GEN-LO-10	GEN-LOV-10	167032	0.00	0.00	0.13		0.13		0.13
22	HYD-O-1	HYD-OV-1	167032	0.00	0.00	0.13		0.13		0.13
23	HYD-O-2	HYD-OV-2	167032	0.00	0.00	0.13		0.13		0.13
24	HYD-O-3	HYD-OV-3	167032	0.00	0.00	0.13		0.13		0.13
25	HYD-O-4	HYD-OV-4	167032	0.00	0.00	0.13		0.13		0.13
26	HYD-O-5	HYD-OV-5	167032	0.00	0.00	0.13		0.13		0.13
27	HYD-O-6	HYD-OV-6	167032	0.00	0.00	0.13		0.13		0.13
28	HYD-O-7	HYD-OV-7	167032	0.00	0.00	0.13		0.13		0.13
29	HYD-O-8	HYD-OV-8	167032	0.00	0.00	0.13		0.13		0.13
30	HYD-O-9	HYD-OV-9	167032	0.00	0.00	0.13		0.13		0.13

Table 2F
Project Emissions Increase Supplement
Texas Commission on Environmental Quality

Pollutant¹:	PM
Permit:	
Baseline Period (Month and Year):	No baseline as this is a new facility
To Baseline Period (Month and Year):	No baseline as this is a new facility

New, Affected, or Modified Facilities²

Item Number	FIN	EPN	Permit Number	Actual Emissions³	A Baseline Emissions⁴	B Proposed Potential to Emit Emissions⁵	C Projected Actual Emissions⁶	Difference, (B-A) or (C-A)⁷	Correction⁸	Project Emissions Increases⁹
31	HYD-O-10	HYD-OV-10	167032	0.00	0.00	0.13		0.13		0.13
32	CT-MSS	CT-MSS	167032	0.00	0.00	1.20		1.20		1.20
33										
34										
35										
36										
37										
38										
39										
40										
41										
42										
43										
44										
45										
46										
47										
48										
Total Project Emissions Increase										49.36

Table 2F
Project Emissions Increase Supplement
Texas Commission on Environmental Quality

Pollutant¹:	PM10
Permit:	
Baseline Period (Month and Year):	No baseline as this is a new facility
To Baseline Period (Month and Year):	No baseline as this is a new facility

New, Affected, or Modified Facilities²

Item Number	FIN	EPN	Permit Number	Actual Emissions³	A Baseline Emissions⁴	B Proposed Potential to Emit Emissions⁵	C Projected Actual Emissions⁶	Difference, (B-A) or (C-A)⁷	Correction⁸	Project Emissions Increases⁹
1	CT-1 CT-2 CT-3 CT-4 CT-5 CT-6 CT-7 CT-8 CT-9 CT-10	CT-1 CT-2 CT-3 CT-4 CT-5 CT-6 CT-7 CT-8 CT-9 CT-10	167032	0.00	0.00	44.19		44.19		44.19
2	CT-LO-1	CT-LOV-1	167032	0.00	0.00	0.13		0.13		0.13
3	CT-LO-2	CT-LOV-2	167032	0.00	0.00	0.13		0.13		0.13
4	CT-LO-3	CT-LOV-3	167032	0.00	0.00	0.13		0.13		0.13
5	CT-LO-4	CT-LOV-4	167032	0.00	0.00	0.13		0.13		0.13
6	CT-LO-5	CT-LOV-5	167032	0.00	0.00	0.13		0.13		0.13
7	CT-LO-6	CT-LOV-6	167032	0.00	0.00	0.13		0.13		0.13
8	CT-LO-7	CT-LOV-7	167032	0.00	0.00	0.13		0.13		0.13
9	CT-LO-8	CT-LOV-8	167032	0.00	0.00	0.13		0.13		0.13
10	CT-LO-9	CT-LOV-9	167032	0.00	0.00	0.13		0.13		0.13
11	CT-LO-10	CT-LOV-10	167032	0.00	0.00	0.13		0.13		0.13
12	GEN-LO-1	GEN-LOV-1	167032	0.00	0.00	0.13		0.13		0.13

Table 2F
Project Emissions Increase Supplement
Texas Commission on Environmental Quality

Pollutant¹:	PM10
Permit:	
Baseline Period (Month and Year):	No baseline as this is a new facility
To Baseline Period (Month and Year):	No baseline as this is a new facility

New, Affected, or Modified Facilities²

Item Number	FIN	EPN	Permit Number	Actual Emissions³	A Baseline Emissions⁴	B Proposed Potential to Emit Emissions⁵	C Projected Actual Emissions⁶	Difference, (B-A) or (C-A)⁷	Correction⁸	Project Emissions Increases⁹
13	GEN-LO-2	GEN-LOV-2	167032	0.00	0.00	0.13		0.13		0.13
14	GEN-LO-3	GEN-LOV-3	167032	0.00	0.00	0.13		0.13		0.13
15	GEN-LO-4	GEN-LOV-4	167032	0.00	0.00	0.13		0.13		0.13
16	GEN-LO-5	GEN-LOV-5	167032	0.00	0.00	0.13		0.13		0.13
17	GEN-LO-6	GEN-LOV-6	167032	0.00	0.00	0.13		0.13		0.13
18	GEN-LO-7	GEN-LOV-7	167032	0.00	0.00	0.13		0.13		0.13
19	GEN-LO-8	GEN-LOV-8	167032	0.00	0.00	0.13		0.13		0.13
20	GEN-LO-9	GEN-LOV-9	167032	0.00	0.00	0.13		0.13		0.13
21	GEN-LO-10	GEN-LOV-10	167032	0.00	0.00	0.13		0.13		0.13
22	HYD-O-1	HYD-OV-1	167032	0.00	0.00	0.13		0.13		0.13
23	HYD-O-2	HYD-OV-2	167032	0.00	0.00	0.13		0.13		0.13
24	HYD-O-3	HYD-OV-3	167032	0.00	0.00	0.13		0.13		0.13
25	HYD-O-4	HYD-OV-4	167032	0.00	0.00	0.13		0.13		0.13
26	HYD-O-5	HYD-OV-5	167032	0.00	0.00	0.13		0.13		0.13
27	HYD-O-6	HYD-OV-6	167032	0.00	0.00	0.13		0.13		0.13
28	HYD-O-7	HYD-OV-7	167032	0.00	0.00	0.13		0.13		0.13
29	HYD-O-8	HYD-OV-8	167032	0.00	0.00	0.13		0.13		0.13
30	HYD-O-9	HYD-OV-9	167032	0.00	0.00	0.13		0.13		0.13

Table 2F
Project Emissions Increase Supplement
Texas Commission on Environmental Quality

Pollutant¹:	PM10
Permit:	
Baseline Period (Month and Year):	No baseline as this is a new facility
To Baseline Period (Month and Year):	No baseline as this is a new facility

New, Affected, or Modified Facilities²

Item Number	FIN	EPN	Permit Number	Actual Emissions³	A Baseline Emissions⁴	B Proposed Potential to Emit Emissions⁵	C Projected Actual Emissions⁶	Difference, (B-A) or (C-A)⁷	Correction⁸	Project Emissions Increases⁹
31	HYD-O-10	HYD-OV-10	167032	0.00	0.00	0.13		0.13		0.13
32	CT-MSS	CT-MSS	167032	0.00	0.00	1.19		1.19		1.19
33										
34										
35										
36										
37										
38										
39										
40										
41										
42										
43										
44										
45										
46										
47										
48										
Total Project Emissions Increase										49.36

Table 2F
Project Emissions Increase Supplement
Texas Commission on Environmental Quality

Pollutant¹:	PM2.5
Permit:	
Baseline Period (Month and Year):	No baseline as this is a new facility
To Baseline Period (Month and Year):	No baseline as this is a new facility

New, Affected, or Modified Facilities²

Item Number	FIN	EPN	Permit Number	Actual Emissions³	A Baseline Emissions⁴	B Proposed Potential to Emit Emissions⁵	C Projected Actual Emissions⁶	Difference, (B-A) or (C-A)⁷	Correction⁸	Project Emissions Increases⁹
1	CT-1 CT-2 CT-3 CT-4 CT-5 CT-6 CT-7 CT-8 CT-9 CT-10	CT-1 CT-2 CT-3 CT-4 CT-5 CT-6 CT-7 CT-8 CT-9 CT-10	167032	0.00	0.00	44.19		44.19		44.19
2	CT-LO-1	CT-LOV-1	167032	0.00	0.00	0.13		0.13		0.13
3	CT-LO-2	CT-LOV-2	167032	0.00	0.00	0.13		0.13		0.13
4	CT-LO-3	CT-LOV-3	167032	0.00	0.00	0.13		0.13		0.13
5	CT-LO-4	CT-LOV-4	167032	0.00	0.00	0.13		0.13		0.13
6	CT-LO-5	CT-LOV-5	167032	0.00	0.00	0.13		0.13		0.13
7	CT-LO-6	CT-LOV-6	167032	0.00	0.00	0.13		0.13		0.13
8	CT-LO-7	CT-LOV-7	167032	0.00	0.00	0.13		0.13		0.13
9	CT-LO-8	CT-LOV-8	167032	0.00	0.00	0.13		0.13		0.13
10	CT-LO-9	CT-LOV-9	167032	0.00	0.00	0.13		0.13		0.13
11	CT-LO-10	CT-LOV-10	167032	0.00	0.00	0.13		0.13		0.13
12	GEN-LO-1	GEN-LOV-1	167032	0.00	0.00	0.13		0.13		0.13

Table 2F
Project Emissions Increase Supplement
Texas Commission on Environmental Quality

Pollutant¹:	PM2.5
Permit:	
Baseline Period (Month and Year):	No baseline as this is a new facility
To Baseline Period (Month and Year):	No baseline as this is a new facility

New, Affected, or Modified Facilities²

Item Number	FIN	EPN	Permit Number	Actual Emissions³	A Baseline Emissions⁴	B Proposed Potential to Emit Emissions⁵	C Projected Actual Emissions⁶	Difference, (B-A) or (C-A)⁷	Correction⁸	Project Emissions Increases⁹
13	GEN-LO-2	GEN-LOV-2	167032	0.00	0.00	0.13		0.13		0.13
14	GEN-LO-3	GEN-LOV-3	167032	0.00	0.00	0.13		0.13		0.13
15	GEN-LO-4	GEN-LOV-4	167032	0.00	0.00	0.13		0.13		0.13
16	GEN-LO-5	GEN-LOV-5	167032	0.00	0.00	0.13		0.13		0.13
17	GEN-LO-6	GEN-LOV-6	167032	0.00	0.00	0.13		0.13		0.13
18	GEN-LO-7	GEN-LOV-7	167032	0.00	0.00	0.13		0.13		0.13
19	GEN-LO-8	GEN-LOV-8	167032	0.00	0.00	0.13		0.13		0.13
20	GEN-LO-9	GEN-LOV-9	167032	0.00	0.00	0.13		0.13		0.13
21	GEN-LO-10	GEN-LOV-10	167032	0.00	0.00	0.13		0.13		0.13
22	HYD-O-1	HYD-OV-1	167032	0.00	0.00	0.13		0.13		0.13
23	HYD-O-2	HYD-OV-2	167032	0.00	0.00	0.13		0.13		0.13
24	HYD-O-3	HYD-OV-3	167032	0.00	0.00	0.13		0.13		0.13
25	HYD-O-4	HYD-OV-4	167032	0.00	0.00	0.13		0.13		0.13
26	HYD-O-5	HYD-OV-5	167032	0.00	0.00	0.13		0.13		0.13
27	HYD-O-6	HYD-OV-6	167032	0.00	0.00	0.13		0.13		0.13
28	HYD-O-7	HYD-OV-7	167032	0.00	0.00	0.13		0.13		0.13
29	HYD-O-8	HYD-OV-8	167032	0.00	0.00	0.13		0.13		0.13
30	HYD-O-9	HYD-OV-9	167032	0.00	0.00	0.13		0.13		0.13

Table 2F
Project Emissions Increase Supplement
Texas Commission on Environmental Quality

Pollutant¹:	PM2.5
Permit:	
Baseline Period (Month and Year):	No baseline as this is a new facility
To Baseline Period (Month and Year):	No baseline as this is a new facility

New, Affected, or Modified Facilities²

Item Number	FIN	EPN	Permit Number	Actual Emissions³	A Baseline Emissions⁴	B Proposed Potential to Emit Emissions⁵	C Projected Actual Emissions⁶	Difference, (B-A) or (C-A)⁷	Correction⁸	Project Emissions Increases⁹
31	HYD-O-10	HYD-OV-10	167032	0.00	0.00	0.13		0.13		0.13
32	CT-MSS	CT-MSS	167032	0.00	0.00	1.19		1.19		1.19
33										
34										
35										
36										
37										
38										
39										
40										
41										
42										
43										
44										
45										
46										
47										
48										
Total Project Emissions Increase										49.35

Table 2F
Project Emissions Increase Supplement
Texas Commission on Environmental Quality

Pollutant¹:	H ₂ SO ₄
Permit:	
Baseline Period (Month and Year):	No baseline as this is a new facility
To Baseline Period (Month and Year):	No baseline as this is a new facility

New, Affected, or Modified Facilities²

Item Number	FIN	EPN	Permit Number	Actual Emissions ³	A Baseline Emissions ⁴	B Proposed Potential to Emit Emissions ⁵	C Projected Actual Emissions ⁶	Difference, (B-A) or (C-A) ⁷	Correction ⁸	Project Emissions Increases ⁹
1	CT-1 CT-2 CT-3 CT-4 CT-5 CT-6 CT-7 CT-8 CT-9 CT-10	CT-1 CT-2 CT-3 CT-4 CT-5 CT-6 CT-7 CT-8 CT-9 CT-10	167032	0.00	0.00	4.66		4.66		4.66
2										
3										
Total Project Emissions Increase										4.66

- Individual Table 2F's should be used to summarize the project emissions increase for each criteria pollutant using the EPA's "substantially related" test to determine the scope of the project.
- Facility Identification Number (FIN) and Emission Point Number (EPN) as designated in NSR permit application or emission inventory.
- All records and calculations for these values must be available upon request.
- Correct actual emissions for currently applicable rule or permit requirements, and periods of non-compliance. These corrections, as well as any MSS previously demonstrated under 30 TAC 101, should be explained in the Table 2F supplement.
- Potential to Emit emissions are the current or proposed allowable emission rate. If Projected Actual Emissions are used for the source, they must be noted in the next column.
- Projected Actual Emissions are subject to 30 TAC 116.127 requirements and the basis for the projection identified in the Table 2F supplement.
- Proposed Potential to Emit (column B) or Projected Actual Emissions (Column C) minus Baseline Emissions (column A). New units must use Proposed Potential to Emit Emissions.
- Correction to be made to the Project Emission Increase for baseline actual emissions that could have accommodated or product demand growth during the baseline period, in accordance with 40 CFR 52.21(b)(41)(ii). Note, the could have accommodated or product demand growth correction may only be used with Projected Actual Emissions. The justification and basis for this estimate must be provided in the Table 2F supplement.
- Project Emissions Increase is obtained by subtracting the Correction column from the Difference column value. The number for each source may be positive or negative.

APPENDIX B EMISSION CALCULATONS

Table B-1
Combustion Turbine Emissions
Elmax Power Station

<u>Parameter</u>	<u>Units</u>	
Operating Parameters		
Potential Max CT Load	MW	52
Nominal CT Load	MW	50
Potential Max CT Max Heat Input	MMBtu/hr	510
Nominal CT Heat Input	MMBtu/hr	475
Typical SU Duration	min	15
Typical SD Duration	min	10
Potential Hourly SUSD Events	events/hr	2
Typical Annual SUSD Events	events/yr	280
Fuel Sulfur Content	gr S/100 dscf	1
Fuel Heat Content	Btu/scf	1020
Oxidation of SO ₂	%	30%
Maximum Emissions From Normal Operation, Potential Max Load		
NO _x basis, 24-hr average	lb/MW-hr	0.14
NO _x , 24-hr average	lb/hr	7.28
CO basis, 24-hr average	ppmvd @ 15% O ₂	9
CO, 24-hr average	lb/hr	10.28
VOC basis, 3-hr average	ppmvd @ 15% O ₂	2
VOC, 3-hr average	lb/hr	3.60
NH ₃ basis, 3-hr average	ppmvd @ 15% O ₂	10
NH ₃ , 3-hr average	lb/hr	6.94
SO ₂	lb/hr	1.43
H ₂ SO ₄	lb/hr	0.66
(NH ₄) ₂ SO ₄	lb/hr	0.88
PM, from combustion	lb/MMBtu	0.0066
PM, total	lb/hr	5.88
Typical Emissions From Normal Operation, Nominal Load		
NO _x basis, annual average	ppmvd @ 15% O ₂	2
NO _x , annual average	lb/hr	3.50
CO basis, annual average	ppmvd @ 15% O ₂	9
CO, annual average	lb/hr	9.58
VOC basis, annual average	ppmvd @ 15% O ₂	2
VOC, annual average	lb/hr	3.36
NH ₃ basis, annual average	ppmvd @ 15% O ₂	10
NH ₃ , annual average	lb/hr	6.46
SO ₂ , annual average	lb/hr	1.33
H ₂ SO ₄ , annual average	lb/hr	0.61
(NH ₄) ₂ SO ₄ , annual average	lb/hr	0.82
PM, from combustion	lb/MMBtu	0.0066
PM, total, annual average	lb/hr	5.82

Table B-1
Combustion Turbine Emissions
Elmax Power Station

SUSD Emissions, Prorated Hourly Rates

NOx SUSD	lbs/event	18
NOx, prorated	lb/hr	37.21
CO SUSD	lbs/event	25
CO, prorated	lb/hr	51.71
VOC SUSD	lbs/event	1.52
VOC, prorated	lb/hr	3.64
NH3 SUSD	lbs/event	6
NH3, prorated	lb/hr	13.16

Notes:

Emission calculations are for one turbine only.

Heat input, MW load, ppm and lb/MMBtu emissions factors, and annual average lb/hr rates are represented as bases for calculation only and are not represented as operational or emission limits. Achievable operating levels and emissions will vary based on ambient conditions and turbine condition.

Table B-2
Gas Turbine Emission Summary
Elmax Power Station

Approximate Annual Turbine Normal Operating Hours, Per Turbine	1,752
Approximate Annual Turbine Normal Operating Hours, All Turbines Combined ¹	14,000
Approximate Annual Number of SUSD Events, Per Turbine ¹	280
Approximate Annual Number of SUSD Events, All Turbines Combined ¹	2800

Pollutant	Maximum Routine Emissions (lbs/hr)	Typical Routine Emissions (lbs/hr)	Startup/Shutdown Emissions (lbs/hr)	Max Annual Emissions Per Turbine (tons/yr) ²	Total Annual Emissions, All 10 Turbines Combined (tons/yr) ³
NO _x	7.28	3.50	37.21	8.90	49.70
CO	10.28	9.58	51.71	12.51	102.03
VOC	3.60	3.36	3.64	3.37	25.62
PM/PM ₁₀ /PM _{2.5}	5.88	5.82	5.88	5.50	44.19
SO ₂	1.43	1.33	1.43	1.24	10.14
H ₂ SO ₄	0.66	0.61	0.66	0.57	4.66
(NH ₄) ₂ SO ₄	0.88	0.82	0.88	0.77	6.27
NH ₃	6.94	6.46	6.94	6.50	49.29

Notes:

1. The approximate number of annual operating hours and hours in startup/shutdown are estimates for a basis of calculation and are not intended to be annual limits for compliance purposes.
2. The maximum annual emissions per turbine are the emissions from one turbine if it operates under the maximum operating scenario shown above, up to the NSPS TTTTa threshold.
3. The total annual emissions for all ten turbines combined is the emission cap for the group of turbines based on operating levels to make the plant a synthetic minor source.

Table B-3
Plantwide VOC Fugitive Emissions
Elmax Power Station

Natural Gas Service Fugitives

EPN	Pollutant	Source Type	Fluid State	Count	Oil & Gas Production Emission Factor	VOC	
						(lb/hr)	(tpy)
VOC-FUG	VOC	Valves ¹	Gas/Vapor	820	0.00992	0.33	1.43
		Flanges ¹	Gas/Vapor	1980	0.00086	0.07	0.30
		Relief Valves ¹	Gas/Vapor	40	0.0194	0.03	0.14
		Sampling Connections ¹	Gas/Vapor	20	0.00441	0.004	0.015
		Compressors ¹	Gas/Vapor	20	0.0194	0.016	0.07
					Totals:	0.44	1.94

CT Lube and Generator Lube systems and Hydraulic Service Fugitives

EPN	Pollutant	Source Type	Fluid State	Count	Refinery Emission Factor	VOC	
						(lb/hr)	(tpy)
VOC-FUG	VOC	Valves ²	Heavy Liquid	2380	0.00051	0.05	0.21
		Flanges ²	Heavy Liquid	5412	0.00055	0.119	0.52
		Relief Valves ²	Heavy Liquid	10	0.35	0.14	0.61
		Sampling Connections ²	Heavy Liquid	10	0.033	0.013	0.06
		Pumps ²	Heavy Liquid	60	0.0460	0.11	0.48
					Totals:	0.43	1.89

VOC-FUG	VOC	Total VOC Fugitives				0.87	3.83
---------	-----	---------------------	--	--	--	------	------

Note 1: Includes fugitive components in natural gas service.

Note 2: Includes fugitive components from CT lube and Generator lube systems and hydraulic service.

Calculation Procedure

Short-Term Emission Rate = Count X Emission Factor

Annual Emission Rate = Count X Emission Factor X 8,760 hours/year / 2,000 lbs/ton

Note

Based on "gas" factors for Oil & Gas Production Operations in TCEQ "Air Permit

Guidance for Chemical Sources: Equipment Leak Fugitives". October, 2000. VOC emissions

were estimated based on a non-methane, non-ethane weight fraction of natural gas of

4.0%

Table B-4
Plantwide Ammonia Fugitive Emissions
Elmax Power Station

Estimated Fugitive Ammonia Emission Rates (EPN NH3-FUG)						
Pollutant	Source Type	Fluid State	Estimated Count	SOCMI w/o C₂	NH₃ (lb/hr)	NH₃ (tpy)
NH ₃	Valves	Light Liquid	437	0.0035	1.53	6.70
		Gas/Vapor	187	0.0089	1.66	7.29
NH ₃	Relief Valves	Gas/Vapor	3	0.2293	0.69	3.01
NH ₃	Flanges	Light Liquid	981	0.0005	0.49	2.15
		Gas/Vapor	420	0.0029	1.22	5.33
NH ₃	Pumps	Light Liquid	10	0.0386	0.39	1.69
					5.98	26.18

Calculation Procedure

Short-Term Emission Rate = Count X Emission Factor

Annual Emission Rate = Count X Emission Factor X 8,760 hours/year / 2,000 lbs/ton

Note

Based on SOCMI w/o C2 factors and AVO control efficiencies in TCEQ "Air Permit Technical Guidance Package for Equipment Leak Fugitives", October 2000.

Table B-5
Oil System Vent Emissions
Elmax Power Station

Notes:

1 - The heating of recirculating lube oil in the gas turbine housing generates oil vapor and oil condensate droplets in the oil reservoir compartments. Lube oil mist emissions in each reservoir are controlled by a mist eliminator.

2 - Unloading, storage, and heated recirculation of lube oil in gas turbine reservoirs will emit less than 0.1 gallon per day of oil per turbine mist eliminator vent, based on estimated oil consumption. The calculated hourly emissions are based on the daily emission rate divided by 24 hours per day.

3 - Lube oil mist will be generated and the corresponding mist eliminator fan will be operated concurrently with turbine operation, including during startup and shutdown, plus additional time after turbine operation. When the gas turbine does not operate for extended periods such that lube oil is cooled to near-ambient temperatures, mist eliminators may be shut down. During this time, vapor breathing and filling losses may occur from each oil reservoir. These latter losses are significantly less than the emission rates calculated on this sheet. Emission calculations are conservatively based on 365 days per year of operation.

Example Calculation:

Hourly ER (lb/hr) = daily volumetric emission rate (gal/day) x density (lb/gal) x (day/24 hr)

$$\text{lb/hr} = \frac{\text{X gal}}{\text{day}} \times \frac{\text{X lb}}{\text{gal}} \times \frac{\text{day}}{24 \text{ hr}}$$

Annual ER (tpy) = daily volumetric emission rate (gal/day) x density (lb/gal) x days of operation (days/yr) x (ton/2000 lb)

$$\text{tpy} = \frac{\text{X gal}}{\text{day}} \times \frac{\text{X lb}}{\text{gal}} \times \frac{\text{X day}}{\text{yr}} \times \frac{\text{ton}}{2000 \text{ lb}}$$

Calculation of Emissions:

EPN	Description	Pollutant	Maximum Annual No. of Days of Operation (days/yr)	Daily Volumetric Emission Rate Per Mist Eliminator Vent (gal/day/vent)	Approx. Density (lb/gal)	No. of Mist Eliminator Vents (vents)	Daily Emission Rate (lb/day)	Hourly Emission Rate (lb/hr)	Annual Emission Rate (tpy)
CT-LOV-1 to CT-LOV-10	Combustion Turbine 1 through 10 Lube Oil	VOC	365	0.10	7.26	1	0.73	0.03	0.13
		PM	365	0.10	7.26	1	0.73	0.03	0.13
GEN-LOV-1 to GEN-LOV-10	Generator 1 through 10 Lube Oil	VOC	365	0.10	7.26	1	0.73	0.03	0.13
		PM	365	0.10	7.26	1	0.73	0.03	0.13
HYD-OV-1 to HYD-OV-10	Unit 1 through 10 Hydraulic Oil	VOC	365	0.10	7.26	1	0.73	0.03	0.13
		PM	365	0.10	7.26	1	0.73	0.03	0.13

Table B-6
Inherently Low Emitting Maintenance Activities
Elmax Power Station

	Calc. Table	Estimated Emissions (lb/hr)					Estimated Emissions (TPY)				
		VOC	PM	PM ₁₀	PM _{2.5}	NH ₃	VOC	PM	PM ₁₀	PM _{2.5}	NH ₃
Turbine Washing, Unit On-Line	B-7		3.256	3.256	3.256			0.594	0.594	0.594	
Air Intake Filter Maintenance	B-8		0.006	0.003	4.08E-04			0.014	0.006	0.001	
Catalyst Handling/Maintenance Annual	B-9		2.461	2.461	2.461			0.591	0.591	0.591	
Ammonia Equipment Maintenance	B-10					0.036					2.15E-04
Fuel Gas Venting	B-11	0.844					2.53E-02				
Analytical Equipment	B-12	2.71E-03					3.18E-03				
Totals =		0.85	5.72	5.72	5.72	3.6E-02	0.03	1.20	1.19	1.19	2.1E-04

Table B-7
Online Turbine Washing (MSS) Calculations
Elmax Power Station

Activity Description:

On-line turbine water washes are used to maintain gross accumulation of air borne contaminants between off-line water washes and compressor maintenance. Volume of deionized water is approximately 12 gpm and water is burned off before getting to latter stages of the compressor (compressor exit temperatures are in the 600+ F range). PM emissions result from residual dust material (on the blade) being released through the unit exhaust during the wash.

	Per Unit		
Total Turbine Blade Surface Area	12,000	ft ²	
% of blade covered by dust	5%	---	
Depth of blade dust	2.5	microns	9.84E-05 in
Flue Dust Density	66.16	lb/ft ³	
Duration of Event	30	minutes	
# of Events per year	365	Daily for each unit	
<u>Blade Dust Calculation</u>			
Surface Area Covered by Dust	600	ft ²	(Total Blade Surface Area) * (% of blade covered by dust)
Dust Volume	4.92E-03	ft ³	(Dust Surface Area) * ((Depth of Dust/12))
Dust (PM)	0.3256	lb/event	(Dust Volume) * (Flue Dust Density)
PM hourly	0.3256	lb/hr	
PM annual	0.0594	tpy	
	For all 10 Units		
PM hourly	3.2559	lb/hr	
PM annual	0.5942	tpy	

Notes: 1. Flue Dust Density based on the average of representations at:

http://www.powderandbulk.com/resources/bulk_density/material_bulk_density_chart_f.htm

http://www.simetric.co.uk/si_materials.htm

http://www.asiinstr.com/technical/Material_Bulk_Density_Chart_F.htm

2. Surface area of turbine blades based on assumption of 19 rows of 4' blades.

3. Calculation assumes no TDS in demineialized water.

54 lb/ft³
90.48 lb/ft³
54 lb/ft³

Calculation Basis: Electric Utility MSS Workgroup.

Table B-8
Particulate Filter Changeout (MSS) Emission Calculations
Elmax Power Station

Activity description:

Particulate matter may be released to the atmosphere during planned filter changes on the combustion units.

Particulate collects on the filter during unit operation and may become airborne during filter handling.

The emission calculations below represent the worst case emissions that could occur on a "per filter change" basis.

E Emission Factor (lb PM/ton)		0.0174	Source/Notes/Assumptions
E Emission Factor (lb PM10/ton)		0.00822	
E Emission Factor (lb PM2.5/ton)		0.001244	
$E = k * (0.0032) * \frac{(U / 5)^{1.3}}{(M / 2)^{1.4}} (lb / ton)$			Based on U.S. EPA AP-42, 13.2.4 "Aggregate Handling and Storage Piles" (Equation 1).
U	Mean Wind Speed (mph)	10.98	The mean wind speed is from the average windspeed for Houston, Texas in TANKS 4.09d.
M	Material Moisture Content (%)	1	Estimate based on process knowledge
K (PM)	PM Particle Size Multiplier	0.74	Particle size multiplier taken from AP-42, Chapter 13.2.4.
K (PM ₁₀)	PM ₁₀ Particle Size Multiplier	0.35	Particle size multiplier taken from AP-42, Chapter 13.2.4.
K (PM _{2.5})	PM _{2.5} Particle Size Multiplier	0.05	Particle size multiplier taken from AP-42, Chapter 13.2.4.
CE	Control Efficiency	0%	Assumed control efficiency

-	Filter Surface Area (ft2)	32,000	
-	Assumed dust thickness before filter casing is opened (mm)	1	
-	Assumed dust thickness before filter casing is opened (ft)	0.003281	
-	Assumed dust density (lb/ft3)	75	
-	Activity Throughput (lb/activity)	7874	Throughput based on volume of accumulated dust on filter material.
-	Activity Throughput (ton/activity)	3.937	
-	Hourly Throughput (ton/hr)	0.328	Assumed hourly throughput.
-	Annual Throughput (tons/yr)	78.740	Assumed annual throughput.

Emission Summary		Source/Notes/Assumptions
Frequency Routine Maintenance (activity/hr)	1	Assume maximum = 1 activity at any time.
Frequency Routine Maintenance (activity/yr)	20	Two filter changes per gas turbine unit, per year
Duration Routine Maintenance (hours/activity)	12	Assumed length of each activity

	Misc Filter Changeout
PM (lb/hr)	5.70E-03
PM (tpy)	1.37E-02
PM10 (lb/hr)	2.70E-03
PM10 (tpy)	6.47E-03
PM2.5 (lb/hr)	4.08E-04
PM2.5 (tpy)	9.80E-04

Calculation Basis: Electric Utility MSS Workgroup.

Table B-9
Catalyst Handling and Maintenance (MSS) Emission Calculations
Elmax Power Station

Activity Description:

The emission calculations below represent the worst case emissions that could occur during routine maintenance or a unit turnaround. Normal maintenance consists of removing catalyst from the SCR and cleaning with vacuum truck. No additional emissions expected associated with total changeout of catalyst (after cleaning of old catalyst).

Assumed surface area of SCR grid (ft ²)	4800	
Assumed dust thickness (mm)	10	
Assumed dust thickness (ft)	0.0328	
Assumed dust density (lb/ft ³)	75	
Activity Throughput (lb/activity)	11811	
Control Efficiency	99.00%	Assumed control efficiency of fabric filter
Total Emissions per activity (lb/activity)	118.11	As PM10

Emission Summary		Source/Notes/Assumptions
Frequency Routine Maintenance Activity (activity/hour)	1	Estimate
Frequency Routine Maintenance Activity (activity/yr)	10	Once per year per turbine
Duration Routine Maintenance (hours/activity)	48	Estimate

Catalyst Maintenance	
PM10 (lb/hr)	2.461
PM10 (tpy)	0.591

Calculation Basis: Simple fabric filter calculation.

Table B-10
Small Equipment Fugitive Component Repair and Replacement (Aqueous Ammonia System)
Elmax Power Station

The emission calculations below represent the worst case emissions that could occur during routine maintenance or a unit turnaround.

Step 1. Equipment Opening Maintenance Vapor Space Calculation

L_o	Opening Loss (lb/activity)	0.00358	Source/Notes/Assumptions
	$L_o = M_v \left(\frac{PV}{RT} \right)$		Based on the Ideal Gas Law with modification for NH3 molecular weight.
P	Vapor Pressure of Material (psia)	14.70	Since the vapor pressure of aqueous ammonia is greater than 14.7 the pressure prior to venting was used.
V	Vapor space volume (feet ³)	0.0852	Based on worst case equipment: 10 feet of 2 inch pipe
T	Average daily temperature (°R)	555.00	95 °F per TCEQ Guidance.
R	Gas constant (psia ft ³ per lb-mole °R)	10.73	
M _v	Vapor molecular weight (lb/lb-mole)	17	Molecular weight for ammonia.

Emission Summary		Source/Notes/Assumptions
Total Emissions per activity (lb/activity)	0.00358	Assume 100% of vapor is NH3
Frequency Routine Maintenance Activity (activity/hour)	10	Based on process knowledge and historical information.
Frequency Routine Maintenance Activity (activity/yr)	120	Conservative Estimate
Duration Routine Maintenance (hours/activity)	1	Assumes all venting emissions occur in the first hour.

Total NH3 Emissions	
(lb/hr)	(tpy)
0.0358	2.15E-04

Calculation Basis: Electric Utility MSS Workgroup. Applicable section utilized for small volume.

TABLE B-11
Gaseous Fuel Venting During Turbine Shutdown/Maintenance &
Small Equipment and Fugitive Component Repair/Replacement
Elmax Power Station

Piping Description						Initial Conditions				Final Conditions				Emissions	
Location	Diameter (in)		Length (ft)	Number of Events		Max Hourly Volume ¹ (ft ³)	Annual Volume ¹ (ft ³)	Press. (psig)	Temp. (°F)	Press. (psig)	Temp. (°F)	Max Hourly Volume ² (scf)	Annual Volume ² (scf)	Hourly (lb/hr)	Annual (tpy)
	nom.	act.		per hour	per year										
Fuel Line	12	11.25	60	2	120	83	4,970	50	50	0	68	381	22,879	0.83	0.025
Small Equipment	---	---	---	2	120	1.3	80.2	50	50	0	68	6	369	0.013	4.02E-04
													Total:	0.84	0.025

1. Initial volume is calculated by multiplying the cross-sectional area by the length of pipe using the following formula:

$$V_i = \pi * [(diameter \text{ in inches}/12)/2]^2 * length \text{ in feet} = ft^3$$

2. Final volume calculated using ideal gas law $[(PV/RT)_f = (PV/RT)_i]$. $V_f = V_i (P_i/P_f) (T_f/T_i) (Z_i/Z_f)$, where Z is estimated using the following equation:

$$Z = 0.9994 - 0.0002P + 3E-08P^2$$

3. Additional Assumptions:

Nat Gas MW 16.80 lb/lbmol
VOC Content of Nat Gas 5.00% by Wt

Example calculation:

381 scf	lbmole	16.8 lb Nat Gas	0.05 lb VOC	=	0.83	lb/hr
hr	385.5 scf	lbmole Nat Gas	lb Nat Gas			

Calculation Basis: Electric Utility MSS Workgroup.

TABLE B-12
Inspection, Repair, Replacement, Adjusting, Testing, and Calibration of Analytical Equipment, Process Instruments
Including Sight Glasses, Meters, Gauges
Elmax Power Station

The emission calculations below represent the worst case emissions that could occur during routine maintenance or a unit turnaround.

Step 1. Clingage Loss Calculation

L _c	Clingage Loss (lb/activity)	0.00135	Source/Notes/Assumptions
$L_c = A_s \times T_f \times D$			
A _s	Surface Area (feet)	0.31	Based on an average size of the equipment.
T _f	Clingage Film Thickness (feet)	8.33E-05	95 °F per TCEQ Guidance.
D	Density of Material (lb/feet ³)	52.46	Based on API Power Regression Analysis for a material with a vapor pressure of 0.15 psia.

Step 2. Splash Loading Loss Calculation

L _i	Equipment Draining Loading Loss (lb/10 ³ gal loaded)	0.493	Source/Notes/Assumptions
$L_i = 12.46 \left(\frac{SPM_v}{T} \right)$			Based on U.S. EPA AP-42, 5.2 "Transportation and Marketing of Petroleum Liquids" (Equation 1).
S	Loading Loss Factor	1.45	Per U.S. EPA AP-42 Table 5.2-1, based on splash loading per TCEQ Guidance.
P	Vapor Pressure of Liquid Loaded (psia)	0.15	Based on representative material.
M _v	Vapor molecular weight (lb/lb-mole)	103	Molecular Weight based on API Power Regression Analysis for a material with a vapor pressure of 0.15 psia.
T	Average daily temperature (°R)	555.00	95 °F per TCEQ Guidance.

L _D	Equipment Draining Loading loss (lb/activity)	1.11E-07	Source/Notes/Assumptions
$L_D = L_i V_t$			
L _i	Loading Loss (lb/10 ³ gal loaded)	0.493	See calculation above.
V _t	Volume of liquid drained (gallon/activity)	0.0002	Assumed to be 1% of total volume (0.02244 gallons) is left in the equipment and drained to pan/enclosed drain.

Step 3. Evaporative Loss Calculation

L _E	Evaporation Loss (lb/activity)	0.000386	Source/Notes/Assumptions
$L_E = 7920 * A \left(\frac{P_a M_w}{RT} \right) \frac{D_{i,a}}{Z_2 - Z_1} \ln \left[\frac{1}{(1 - y_{c1})} \right] * t$			Ajay Kumar, N.S. Vatcha, and John Schmelzle, "Estimate Emissions From Atmospheric Releases of Hazardous Substances," Environmental Engineering World, November-December 1996, pages 20-23.
A	Vessel opening area (m ²)	0.07	Area for a 5 gal bucket (~11.75 in. dia.)
P _a	Atmospheric Pressure (Pa)	101,325	
M _w	Molecular weight (kg/kgmol)	103	Molecular Weight based on API Power Regression Analysis for a material with a vapor pressure of 0.15 psia.
R	Universal Gas Constant (J/°K·kgmol)	8314	
T	Temperature (°K)	308	95 °F per TCEQ Guidance.
D _{ia}	Diffusivity of component through air (m ² /s)	6.28E-06	Assumed diffusivity of diesel fuel
Z ₂ -Z ₁	Empty vapor space above liquid level in vessel (m)	0.37	Assumed 5 gal bucket (14.5 in)
y _{c1}	Volume fraction of component in air	0.010	
t	Time that material sits in pan before removed by vacuum truck (hr)	0.25	Based on past experience.

Emission Summary		Source/Notes/Assumptions
Total Emissions per activity (lb/activity)	0.00174	Summation of Steps 1 through 3.
Frequency Routine Maintenance Activity (activity/hour)	2	Based on process knowledge and historical information.
Frequency Routine Maintenance Activity (activity/yr)	3650	Based on process knowledge and historical information.

Total VOC Emissions	
(lb/hr)	(tpy)
0.0027	3.18E-03

Calculation Basis: Electric Utility MSS Workgroup.

APPENDIX C PLOT PLAN



ELMAX POWER STATION

PLOT PLAN

EGU Standard Permit Registration

Drawn by:	E Rapier	Date:	12/11/24
Checked by:	J Coleman	Sheet:	1 of 1



ELMAX POWER STATION

PLOT PLAN - DETAIL

EGU Standard Permit Registration

Drawn by:	E Rapier	Date:	12/11/24
Checked by:	J Coleman	Sheet:	1 of 1

**APPENDIX D PUBLIC UTILITY COMMISSION OF TEXAS
MEMORANDUM**



Filing Receipt

Filing Date - 2024-12-12 09:31:54 AM

Control Number - 56896

Item Number - 60

Public Utility Commission of Texas

Memorandum

TO: Chairman Thomas J. Gleeson
Commissioner Lori Cobos
Commissioner Jimmy Glotfelty
Commissioner Kathleen Jackson
Commissioner Courtney K. Hjaltman

FROM: Tracie Tolle, Texas Energy Fund Director

DATE: December 12, 2024

RE: December 12, 2024 Open Meeting – Item No. 32

Project No. 56896 – Texas Energy Fund In-ERCOT Loan Program Reports and Filings

At the August 29, 2024 open meeting, the Commission advanced a portfolio of applications seeking funding under the Texas Energy Fund (TEF) In-ERCOT Generation Loan Program to due diligence review. Since the advancement of that portfolio, Commission Staff (Staff) have identified two additional applications from the pool of remaining applications to recommend for advancement to due diligence:

Application Number	Sponsor Name	Capacity (MW)
APP-016	NRG Energy, Inc.	721
APP-237	WattBridge Energy IPP Holdings, LLC	510

Application 016 and Application 237 seek \$805 million in TEF funds and represent 1,231 megawatts of potential new generation. The advancement of the two additional applications to due diligence would result in a revised portfolio of 18 total applications, \$5.342 billion in loaned TEF funds, and 9,720 megawatts in potential new generation.

Attachment 1 shows aggregated application information for a revised portfolio that would include these recommended applications.

Methodology

Staff arrived at the recommendation of Application 016 and Application 237 by completing a comparative analysis of the fifty-five applications not previously advanced to due diligence. As stated in Staff's August 29, 2024 memorandum applications were assessed based on responses to four major categories of application information: (1) project technical and regional attributes, (2) project financial attributes, (3) application sponsor history, and (4) application sponsor financial characteristics. Staff also aimed to meet

the commissioners' stated priorities: (1) diversity among applicant types, (2) diversity in siting location, (3) speed to market, (4) ability to relieve transmission constraints, and (5) diversity of generation resource types.

In response to lessons learned from the first round of applications invited to due diligence, Staff performed an enhanced Know Your Customer review to ensure that the recommended applications would result in suitable TEF borrowers. Staff also assessed whether each applicant has made arrangements to obtain required equipment to begin timely construction of TEF projects. Finally, Staff prioritized applications with evidence of a signed Engineering, Procurement, and Construction Agreement and signed equity commitment or attestation letter.

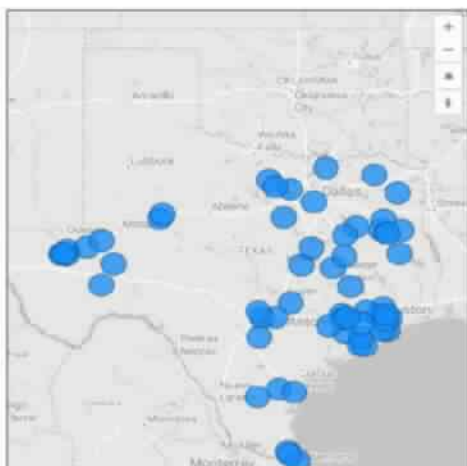
Staff Recommendation to Due Diligence

Staff recommends that the Commission approve the advancement of Application 016 and Application 237 to due diligence review to determine their eligibility for TEF funding. Staff expects that due diligence review for these applications will take between four and eight months.

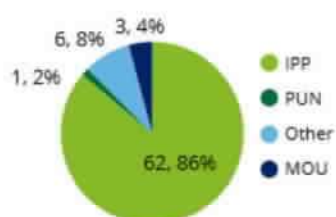
Staff is prepared to discuss any part of this memo at the December 12, 2024 open meeting.

In-ERCOT General Loans Program – Recommended Portfolio, December 2024

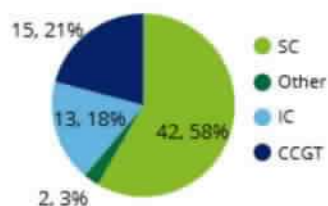
Locations of 72 Applications



Entity Type¹ of Loan Applications



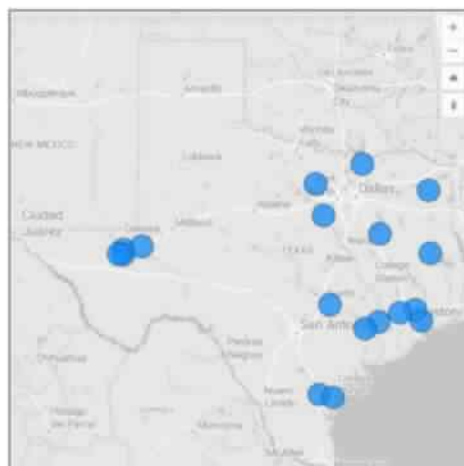
Technology Type² of Loan Applications



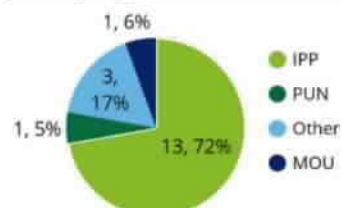
Value of Loans



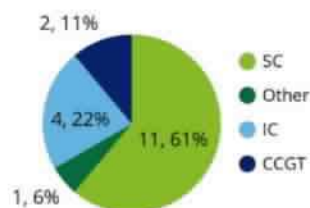
Locations of Portfolio of 18



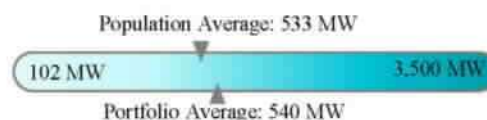
Entity Type of Loan Portfolio



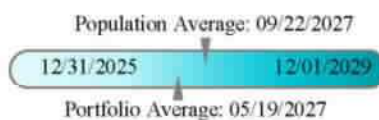
Technology Type of Loan Portfolio³



Megawatts (MW) of Projects



Commercial Operations Date



¹ Independent Power Producer (IPP), Private Use Network (PUN), Municipal Owned Utility (MOU)

² Simple Cycle (SC), Internal Combustion (IC), Combined Cycle Gas Turbine (CCGT)

³ Data in pie charts is shown as (number of applications, percentage of applications)